THE GROWING BOY

BY

PAUL HANLY FURFEY

SOCIAL PROBLEMS OF CHILDHOOD

THE GANG AGE

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Case Studies of Developmental Age

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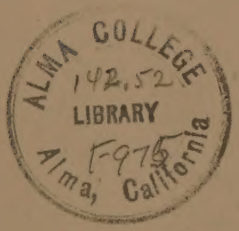

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TO

THOMAS VERNER MOORE

WHO FIRST INTERESTED ME IN THE
SCIENTIFIC STUDY
OF HUMAN BEHAVIOR

PREFACE

It is important to know how the personality of the child develops with age. Unless we understand the characteristics of the preschool period, the gang age, adolescence, and the various intermediate ages, we shall not be able to meet intelligently the diverse problems of childhood. Modern social science is making a very determined effort to treat the child as an individual. It cannot do this without a thorough understanding of his behavior and its underlying causes. This applies to the modern socialized school, to organized recreational work, to the sane treatment of delinquency, and to many other problems.

Unfortunately, there has been little effort to study this problem by genuinely scientific methods. Our present knowledge of the psychology of childhood is based largely on questionnaire results and on the study of individual children. Neither of these methods satisfies modern standards. The consequence is that most of what passes for child psychology at present is quite worthless from the standpoint of science. It would scarcely be exaggerating to say that the study of the personality of the growing child is a virgin field.

This condition is perfectly understandable. The human personality is so complex that psychology has only recently developed techniques for studying it with relative accuracy. Two of these newer methods are particularly promising—the objective test and the clinical method. Each of these has its contribution. The test technique is subject to statistical control and its results may be presented quantitatively. On the other hand the clinical method—by which is meant the intensive study of individual cases—has the merit of presenting a picture of the child as a whole. Each has its advantages and its disadvantages. In combination they offer a most promising method of attack.

The present study is concerned with the development of personality in boys between their sixth and sixteenth birthdays. Both of the techniques mentioned above have been used, but the principal emphasis has been placed on the case method. The results of an attack on the problem by the test technique are presented in Chapter II. The remainder of the book is based upon intensive case studies. The subjects were a group of 168 boys living in one section of a large eastern city. While it was impossible to eliminate all selective factors, it is felt that these boys represent a fairly typical cross section of urban, American boy life.

Paul Hanly Furfey.

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CHAPTER I

ON GROWTH IN GENERAL

HUMAN growth is perhaps the most remarkable phenomenon known to science. At birth the human infant is among the most helpless of all animals. He is not able to guard himself against the commonest physical dangers. Left to his own resources he would almost certainly perish in a few hours. Yet twenty years later this same human being has far outstripped the entire animal creation. He has become the undisputed master of all living things. His mentality is such that it sets him apart in a class by himself.

The differences between the newborn infant and the adult are manifold. The years which separate birth from maturity witness a most remarkable series of changes. First and most obvious is the growth in size. The adult may weigh twenty times as much as the infant, while his height has increased about threefold since birth. More remarkable still is his mental growth. At birth the infant is equipped

with only a few very primitive reflexes. There is nothing about his mental life to distinguish him sharply from other animals. But a few years later he has acquired the intellectual equipment characteristic of a human being.

Besides this obvious growth of body and mind other changes are taking place in the child, more difficult to define and measure. These are changes in personality. Each age of childhood has its own characteristics. The newborn infant fails almost entirely to react to other personalities, while a few months later his characteristically beautiful reactions to mother love have appeared. The child of five is likely to be interested in dramatic play. He becomes by turns a soldier, a fire engine, and a school teacher, as fancy dictates. Three or four years later he has put these things behind him, not without a certain contempt. The boy of thirteen, with his disdain for girls, certainly differs from his elder brother who spends an hour and a half preparing for a dance. Evidently these various changes represent a sort of growth which is neither a mere increase in intelligence nor in bodily size. This gradual change of personality with increasing age will form the subject of this book. For want of a better term we shall call it *developmental age* (DA).

Although developmental age is to be our main preoccupation it is impossible to omit altogether some consideration of physical and mental growth. For

these various aspects of ontogenesis are closely interrelated. There is a constant interplay between body and mind. The most recent studies tend to show that there is a small but real correlation between mental and physical growth (1, 20). Both physique and intelligence have their effect on behavior. The child with a weak and undeveloped body is likely to be handicapped to some extent in his social adjustments, while limited intelligence also circumscribes the range of possible development.

Physical growth—like every natural phenomenon—takes place presumably in accordance with natural laws. Yet these laws are so obscure that very little is known of them. Attempts have been made to derive laws of growth from *a priori* considerations. Robertson, for instance (16, 17, 18, 19), has argued that growth is what chemists call an "autocatalytic reaction." It is true enough the two processes show a certain parallelism. Yet Robertson's theory almost certainly oversimplifies the growth process. Baas-Becking and Baker (2) have attempted a mathematical analysis of some of the simplest possible cases of organic growth—for instance, the growth of filaments of *Spirogyra*. Anyone who follows their treatment will be struck with the infinite complexity of the growth process and will at once realize the futility of attempting an *a priori* derivation of the very much more complicated laws which presumably govern human growth. Such

a derivation may be possible some day, but certainly not in our present state of knowledge.

Although the exact mathematical laws of growth still prove elusive it is possible to make some generalizations about the shape of the growth curve. If we study almost any case of organic growth and plot a graph for it, we must be struck by the fact that this curve shows a rapid increase followed by a tendency to slow up and approach a definite limit.

It is easy to understand the reasons for this initial acceleration and subsequent slowing up. Consider, for instance, the growth of the fertilized ovum. We know from embryology that this cell will divide into two other cells, that each of these will divide into two more, and so on. Consequently the number of cells existing at the end of successive units of time will be expressed by a series of the form: 1, 2, 4, 8, 16, and so forth. In other words, growth, in its initial stages, tends to take the form of a geometrical progression, and the curve of growth bends sharply upward.

It is evident, however, that the process does not go on forever. All known cases of growth tend to approach a more or less definite upper limit. No one expects that a boy will keep on growing until he is twenty-six feet high. No one expects to find an *Amœba* as big as a teacup. And thus it is, that for reasons almost entirely unknown to us, the process of growth tends to a limit and the growth curve gradually flattens out and becomes asymptotic.

We are thus in possession of one general law; namely, that organic growth proceeds first at an accelerated rate and then, after a certain point is reached, at a constantly decreasing rate. Pearl (14, 15), who has studied a great many growth curves, has found it possible to fit them with what he calls a "logistic" curve of the form:

$$y = d + \frac{k}{1 + e^{f(x)}}$$

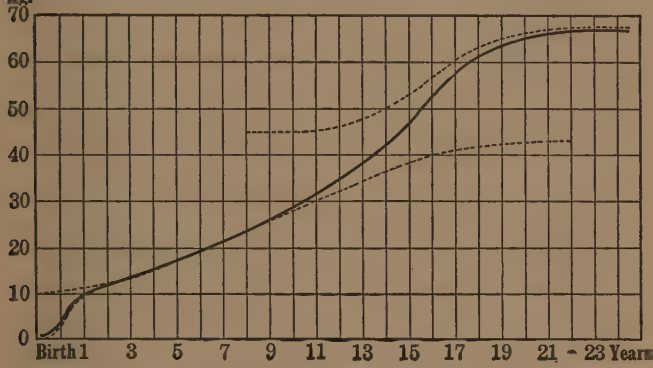
where f(x) can be developed in a power series. He found that this curve gave remarkably good fits with the most widely divergent sorts of growth—for instance, the growth of white rats, of pumpkins, and of the regenerating tails of tadpoles. More surprisingly still it applied not merely to single individuals but to populations. It gave good fits for the data representing the growth of populations of yeast cells, of *Drosophila* in fruit jars, and of the human populations of countries shown by their census reports.

It is important to note that Pearl's curve has a purely empirical basis. It does not rest on any theoretical assumptions. It is important also not to be led astray by the appearance of accuracy which his formula might give. As a matter of fact, his curve is merely a mathematical expression of the fact that: *growth proceeds with increasing rapidity up to a certain point and then more and more slowly until a definite limit is approached.*

The above statement needs in some instances a slight modification. For example, when Pearl studied the growth of the population of Germany he found that the curve showed an irregularity in the part representing, roughly, the years 1850 to 1870. He was able to give, however, a very reasonable explanation of this fact by dividing the growth of Germany into two phases. He found that the growth of that country could be analyzed into two curves of the familiar shape mentioned above, one of which was reaching its limit around the middle of the last century when the second was just beginning to make its influence felt. History, of course, has a ready explanation for this. It is known that at the period in question the life of Germany underwent a rebirth, and together with the dawn of a new national consciousness there was an important shift from rural to industrial life. What could be more natural than that under these changed conditions the population of Germany should enter upon a new cycle of growth?

The same thing is known to be true of human physical growth. The accompanying graph reproduced from Davenport (6) will show that human growth may be reasonably explained as a combination of three growth cycles, the first of which begins with conception and approaches its limit at about the end of the first year of extra-uterine life. The second cycle represents the more gradual growth during childhood, while the third is the well-known

adolescent growth spurt which carries the child to maturity. On the basis of these various data we may formulate a general law as follows: *Growth consists of one or more cycles, each of which is characterized by an initial acceleration and a subsequent deceleration of the growth rate.* The above state-



Analysis of the Growth Curve of Body Weight of Males (full line) into three Growth Cycles (dotted lines). After Davenport.

ment will be referred to hereafter as *the First Law of Growth.*

The second striking fact in physical growth is its diversity. It would be a great mistake to think of the infant as merely a small adult. Nothing could be more erroneous. As Terman says, "The child is different from the adult in every fiber, every blood corpuscle, every bone cell, and in the relative proportions of all his parts" (21, p. 54). If an infant could be suddenly magnified to the size of an adult

he would be a monster with an enormous head and small, undeveloped limbs. He would scarcely be recognized as human. From infancy to adulthood the height of head only doubles while the length of the body increases threefold, the length of the arms increases fourfold, and the length of the legs increases fivefold (12, p. 10).

Growth, therefore, is not a merely quantitative process. It is not simply an increase in size. The adult is not only bigger than the infant, he is different; and this difference extends to almost every part of his organism. The infant must sleep fifteen to twenty hours a day while the adult sleeps seven or eight. The infant's pulse rate is almost, and his rate of respiration is more than, twice that of the adult. Whereas the adult's skeleton is made of hard bone, the infant's consists largely of cartilage. The young child's teeth are entirely different from the adult's. His digestive system can handle only certain foods. No matter what part of the body we examine, striking differences appear. This leads to a *Second Law of Growth* which we may formulate as follows: *Organic growth is, in general, not merely quantitative but qualitative as well.*

A very great many studies have been made of the physical growth of children. These are conveniently summarized by Baldwin (3), and the United States Children's Bureau has published an excellent bibliography (23). In the present volume it will be useful

to have a set of norms so that the growth of the cases here studied may be compared with the growth of normal children. Since it is known that children of different social and racial backgrounds grow at widely different rates, it will be necessary to secure norms derived from a group as nearly as possible like the group studied herein. The best norms for this purpose would seem to be those of Clark, Sydenstricker and Collins (5), which are based on the measurement of white children from Maryland, Virginia, and North and South Carolina. These should resemble fairly well the District of Columbia children of the present study. They will be referred to hereafter as the "United States Public Health Service" norms. For comparative purposes, Davenport's (7) summary will be cited as the most representative critical collection of the results of a large number of investigators from all parts of the world.

It is comparatively easy, by means of scales, measuring tapes, and calipers to obtain fairly accurate measurements of physical growth. The same cannot be said of the growth of the mind. The measurement of intelligence presents such difficulties that it has been attempted systematically only within the present century. The real beginning of the test movement is due to a Frenchman, Binet by name, who, with his co-worker Simon, developed the first practical intelligence scale and published it in 1905. This consisted of a series of questions graded by ages. For

example, in the 1911 revision of the scale, an eight-year-old child was expected, among other things, to count from twenty backwards to zero, to give the correct date, and to repeat five numbers.

The most common intelligence examination used by American psychologists for accurate work is the Stanford Revision of the original Binet-Simon scale. This was published by Terman in 1916 (22). It consists of a graded series of tests. A child who can answer all the three-year questions but no others is said to have a *mental age* (MA) of three years. A child who can answer all the three- and four-year-old questions and no others is said to have a mental age of four years, and so on. By a system of partial credits mental ages are assigned to children who pass some of the tests and fail on others at a given age level.

Since the development of successful intelligence tests of the above type, various *group tests* and *performance tests* have made their appearance. The former can be given to a large group at once, as their name implies. They generally consist of printed booklets with questions of various sorts which the testee answers. The performance tests are puzzles of different types which the child attempts to do, generally within a certain time limit. Since group tests or performance tests involve no principle radically different from individual tests of the Binet type they need not be considered in more detail at this point.

One great contribution of the test movement has been the introduction of mental age as a unit of mental growth. Before this was introduced there was no way of expressing quantitatively degrees of intelligence. We could say that a given child was four feet and six inches tall or that he weighed eighty-five pounds, but we had no way of expressing the extent of his mental development. Since the introduction of intelligence tests, however, it has become possible to say that the child has a mental age of eight years, ten years or twelve years as the case may be.

Although the use of mental age is undoubtedly a great advance there is a defect in the technique which is apparent upon a few moments' consideration. Mental age does not form a scale in the sense that a meter stick does. In the latter case we know that every centimeter is approximately equal to each of the other centimeters, from whatever part of the scale they may be taken. But the same thing cannot be said of mental age. We have no means of knowing, for example, that the one year of mental age which separates age five from age six is equivalent to the year separating age twelve from age thirteen. The situation might be compared to that of a chemist with a balance whose weights are marked *one gram, five grams, ten grams,* and so forth, yet who does not know whether the five-gram weight actually weighs just five times as much as

the one-gram weight. In a word, we have no absolute scale of mental growth.

The above facts make it difficult to investigate mental growth quantitatively and to determine whether it is subject to the same general laws as physical growth. We can, however, answer these questions in a tentative way. We have found that with physical growth two generalizations hold true. Do the same laws hold for mental growth?

There is some evidence that the First Law of Growth is verified in the case of mental development. It would seem true enough that mental growth proceeds with extreme rapidity during the first months of life. All those who have studied the question agree with this statement. Only a psychologist can detect an increase in mental ability between a child at fourteen and the same child two months later. But the difference between an infant at four months and an infant at six months is quite apparent, as anyone may learn by reading Chapter Seventeen of Gesell's *The Mental Growth of the Preschool Child* (10). Again, there is a great deal of evidence that mental growth slows up and reaches a limit at a certain definite period, somewhere between thirteen and eighteen years. Beyond that time a person may grow in experience. He may acquire new knowledge and new techniques, but in pure intelligence he probably will not grow any more than he grows in stature. Terman recognizes this

fact by setting sixteen years as the average mental age of adults, and subsequent research has tended to show that this age is too high rather than too low. Probably no competent psychologist would dispute the statement that mental growth approaches a limit somewhere during the second decade of life (9, 11). When we compare mental growth to physical growth, then, we can only say that it, too, proceeds rapidly at first and afterwards reaches a limit. Whether it consists of one or more cycles, and how closely these cycles parallel physical growth, can only be determined after more accurate methods of measuring intelligence have been developed (4, 8).

In regard to the Second Law of Growth we can talk with much more certainty. Mental growth undoubtedly shows the same diversity at different ages as does physical growth. The entire mental equipment of the newborn consists of a few simple reflexes. As he grows older his mental progress does not consist merely in the appearance of more and better reflexes. At least, no one but a behaviorist would say so. On the other hand the child apparently develops quite new mental processes. Language gradually appears after his first birthday. It is not as if the child could talk a little at birth and gradually learns to talk more and more. At birth he gives no more promise of language ability than does a young puppy or a young chick. So it is all through his mental life. The development of those

processes which we speak of as "reasoning" does not make much headway until the school years. If we could take successive cross sections of a child's mental status they would undoubtedly show not merely quantitative differences but qualitative differences as well. It would seem, therefore, that the process of mental growth is as varied as physical growth and that in each case our two laws hold good.

It will be seen from the above that both in the case of mind and body, growth is a very complicated process and that it is uniform neither quantitatively nor qualitatively. Upon this shifting background of growing body and mind the development of personality takes place. This latter process will form the major topic throughout the remainder of this volume.

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CHAPTER II

DEVELOPMENTAL AGE

DEVELOPMENTAL age (DA) is the present writer's term for the progressively increasing maturity of behavior which shows itself in the child's changing interests and in his whole behavior. The boy who enjoys baseball has a higher developmental age than the boy who likes to make mud pies. In other words he is more mature. Similarly the girl who enjoys social dancing is more mature than the girl who likes to play with dolls.

This type of maturity is sharply to be distinguished from mere chronological age. Two children may be born on the same day and yet show startling differences of behavior. There are fourteen-year-olds who act like children, and there are fourteen-year-olds who act like adults. Developmental age is also to be distinguished from mental age. Maturity of conduct does not necessarily imply advanced intelligence. It is possible to be mature and stupid and it is possible to be immature and brilliant. Data to be presented later in this chapter show that there is little correlation between mental age and developmental age.

This gradual maturing of the personality has, of course, been long evident to psychologists and they have denoted the various stages in the growth of developmental age by such descriptive phrases as "early adolescence," "the Big Injun age," "the period of competitive socialization," and similar phrases. Although these terms are useful for description they are open to certain objections. In the first place, writers have notoriously failed to agree on any one classification of the stages of this growth. This lack of agreement extends not merely to the nomenclature of the various stages but—what is much worse—to their number and duration as well. How serious the lack of agreement is has been shown by Lehman and Witty (11, pp. 44-49).

One important cause of this pronounced disagreement is the fact that very few objective studies have been made in the field. A large part of the existing literature of child psychology is based on theoretical considerations or upon insufficient observation. In the past this was more or less inevitable because of the lack of suitable techniques. At present, however, this difficulty does not exist to such a serious degree because there are now two efficient methods available for the study of the human personality; namely, the test technique and the case method.

The test technique was developed in connection with the testing of intelligence, beginning with the work of Binet and others some twenty-five years

ago. Although such tests leave very much to be desired they do yield a method of studying one aspect of human personality in a quantitative manner.

Since the time of Binet, this same method has been applied to the study of qualities other than general intelligence. Besides its use in measuring educational progress it has been employed for the measurement of honesty, psychoneurotic tendencies, and a host of other qualities (8).

The case-work method was gradually developed by social workers to study the cases of social inadequacy coming to their attention. It has reached its most significant development in the psychiatric clinic. In the best of these agencies the methods of psychology, general medicine, social case work and psychiatry are brought to bear on each individual case, thus giving a well-rounded and many-sided view of the problem.

As has been said already, these two techniques make it possible to study the course of child development with a degree of accuracy far superior to the more or less random observations of the older psychologists. The present writer has endeavored to use both methods, feeling that they dovetail with each other in such a way that each overcomes the deficiencies of the other. The use of objective tests has the great advantage that it can be subjected to statistical analysis. On the other hand the case

method, while less mathematically exact, reveals many of the more subtle factors which would be lost in a test.

The bulk of the present volume will be devoted to the analysis of case studies. But first we shall briefly summarize the results of a study of developmental age which the writer has published elsewhere (1, 3, 7).

There are two available methods for the quantitative estimation of personality traits; namely, the rating scale and the objective test. In the present investigation it was decided to use both of these so that one could be checked against the other.

The first step was to make a preliminary study of thirty-five boys between the ages of eight and sixteen to determine what traits were characteristic of maturity. The boys were therefore divided tentatively into seven groups of five each, each group representing successively more mature individuals. Thirty-three traits were tried out against this rough criterion to see whether or not they were diagnostic of developmental age. Some traits were discarded because they did not seem to bring into relief the differences under consideration. Others were discarded because they proved to be difficult to rate. This left eighteen traits which seemed from this preliminary study to be good indices of developmental age.

It was felt that it would be easier for judges to

rate the trait *developmental age* if it was thus split up into eighteen sub-traits, because each of these eighteen traits would constitute at least a partly independent judgment and it is known that the reliability of ratings is higher, the more judgments enter into it. This conjecture was strikingly verified (2).

As subjects for the rating-scale experiment seventy-five boys were used. They were all members of a club group with whom intensive experimental work had been done. The mean age of the subjects was 169.50 months with a standard deviation of 15.54 months.

These boys were rated by two judges, who knew all the individuals very well, on each of the eighteen separate sub-traits. The ratings of the judges of these sub-traits were then correlated with each other. They gave a mean correlation [1] of .69, which is about as good an agreement as has been shown in other similar ratings of separate traits. When, however, these eighteen ratings were combined into one single rating of developmental age, it was found that the pooled ratings of one judge correlated with the pooled ratings of the other judge to the extent of .89. By a well-known formula (the Spearman-Brown formula) it was possible to estimate the reliability

[1] A "coefficient of correlation," or simply a "correlation" is a statistical device to express the agreement of two series of numbers. It can vary from +1.00 (perfect agreement) to −1.00 (perfect inverse relationship).

of the combined ratings of the two judges taken together. This was accordingly done. A coefficient of reliability of .94 was obtained. It may be stated, for the benefit of those unfamiliar with the subject, that this is unusually high reliability for a rating scale.

A rating scale of this sort gives satisfactory results for research purposes. But it leaves something to be desired as a practical measuring device. For this reason the bulk of the work was done with an objective paper-and-pencil test. After considering various possibilities, a scale was developed consisting of four tests. The first of these was concerned with reading preferences. The second was a test of play interests. The third tested attitudes by the method of controlled association, while the fourth dealt with activity preferences.

This test was given to about five hundred boys in four grammar schools and one high school in the city of Washington in May, 1925. After discarding a number of incomplete papers 450 remained, which constituted the experimental material on which the scale was standardized.

In a test of this sort two questions have to be answered: first, does the test measure anything; and secondly, does it measure the thing which it proposes to measure? The former quality is technically known as reliability, the second is known as validity. Both of these may be expressed in mathematical

coefficients which are very significant to the student of the test technique. This was accordingly done. It was found that the test had a reliability of .76 by the method of split halves and a validity of .70 measured by correlation with the rating scale corrected for attenuation. Its correlation with chronological age was .51. In simple language this means that although the test measures a slightly different quality from the rating scale, it is, however, a satisfactory test for research purposes. Before it can be used extensively for individual diagnosis it must be lengthened and otherwise improved.

One question which very naturally suggests itself in connection with developmental age is this—why do boys of the same chronological age show such noticeably different degrees of maturity? What factors underlie the marked differences in developmental age to be found in the same age group?

The test and rating scale can be made to throw some light on the subject. A group of boys who had taken the test for developmental age and had been rated on the rating scale were also given an intelligence test and were weighed and measured. Coefficients of correlation were then computed as shown in the accompanying table. It will be seen that there was practically no correlation between mental age and developmental age, but that there was a small but significant relationship between developmental age and both weight and height.

CORRELATION OF RATING AND TEST SCORE WITH CERTAIN VARIABLES [1]

	Mental Age	*Weight*	*Height*
Rating	—.15	.28	.40
Test Score	.23	.22	.16
Mean	.04	.25	.28

The same result may be expressed in simpler language as follows: In a group of twelve-year-old boys there will be little tendency for the brighter individuals to act in a more mature manner than the less brilliant boys. There will be, however, a slight but noticeable tendency for the taller and heavier boys to act more maturely than the shorter and lighter boys.

This relationship between maturity of behavior on the one hand and physical characteristics on the other is not wholly unexpected. For it is known that particularly at pubescence there is a close relationship between mental and physical traits, probably due to the presence of a hormone in the blood stream which is responsible for both sets of phenomena. The work of Kretschmer (9) and others has shown unexpected relationships between mental and physical traits.

Further data on this relationship came to light in the course of the present study. On page 145 of the

[1] These coefficients represent partial correlations, with chronological age constant.

present book a diagram is reproduced showing the ages at which boys left an experimental Scout Troop conducted by the present writer. This graph shows a remarkable parallelism with the curve of pubescence, which implies that the two phenomena have a common origin. Again, the present writer (4) discovered a similar parallelism between the pubescence curve and curves representing a loss of interest in such activities as playing tag, marbles, cops and thieves, run-sheep-run, follow-the-leader, and other immature sports. Lehman (10) has reported the same phenomenon in connection with the loss of interest in doll play on the part of girls. Of course, this parallelism does not absolutely prove that the behavior traits in question are due to pubescence, but it at least establishes a strong presumption that such is the case.

When the test was given to 450 boys it became possible to compute the normal score which a boy of a given age should make. By the use of these standards it also became possible to compute *developmental quotients* (DQ's) analogous to intelligence quotients. A DQ of 100 means that a boy is exactly as mature as other boys of his age according to our test. A DQ of 110 means that he is as mature as the average boy ten per cent older than he. A DQ of 75 means that he is as immature as the average boy three-fourths of his age. The following two cases will illustrate extreme instances:

Case 1. Roger received the lowest DQ of any boy in the school which he attended. At the age of fourteen years and eleven months he had a DA of nine years and ten months, and a DQ of 64. Otherwise the boy seemed quite normal. His Stanford IQ of 106 showed a little better than average mental ability. A physical examination revealed no significant defect. When, however, the boy's play life was examined his abnormality became quite evident. He was a notorious sissy and very unpopular with other boys. He was very shy and repressed in his social relations and had few friends. He never played the team games.

Case 2. Sam was the antithesis of Roger. At the age of fourteen years and nine months he had a DA of nineteen years and four months which gave him a DQ of 135. Yet mentally he showed no marked acceleration as is revealed from his Stanford IQ of 111.

Sam was quite the young man. He was very supercilious and conceited. He attended a gym class made up of boys of his age for a time, but then left it to join an older group. He spent a great deal of time with a number of adolescent boys who lived near him. The group played poker whenever they could evade their parents and they purloined their elders' home brew for an occasional spree.

The investigations just discussed show that developmental age is a measurable quality. They show,

furthermore, that it is a quality more closely associated with physical than with mental growth, and they have given us some indication of the effect of various degrees of developmental age on behavior. This amount of information has been yielded by the use of the test technique. We shall now turn our attention to the use of the case method for whatever light it can throw on developmental age. The remainder of the present volume, therefore, will be based almost entirely on case studies made on a group of 168 boys during a period of about four years.

In such a study as this, it is naturally desirable to get an unselected group. That is to say, a group which would be representative of the population of the country as a whole. Many reasons make it difficult to approximate this ideal in practice. Particularly in an investigation like the present, in which intensive personal study is necessary, it would not be feasible to secure a group representing the various parts of this country, different social strata, and cultural backgrounds.

The boys included in the present study all attended one grammar school in the city of Washington or—in the case of the older boys—were graduates from it. Our results must be interpreted in the light of this fact. We cannot say without further investigation how far our generalizations may be extended to country boys or to boys from a different

section of the United States or from a foreign country. These questions must form the subject for further investigation. It is believed, however, that at least many of the generalizations herein made are based upon fundamental human nature rather than upon the accidents of environment, and that they would be found to hold in somewhat modified form in other groups as well. This, however, is a conjecture which calls for further investigation.

An endeavor was made to study each case as intensively as possible. Ideally, this should include a home investigation along the lines of social case work, a physical examination by a physician, the use of psychiatric tests, and finally a case study of the child's personality. As a matter of fact all these methods were used, but unfortunately lack of resources made it impossible to apply each technique in every case.

The Stanford-Binet was given to about half the cases, that is to say, to eighty-three out of the total of one hundred and sixty-eight. The median intelligence quotient for these cases was 108.8. The boys studied, therefore, were somewhat above the average in intelligence but probably not far above the average for city children. In addition to this, the Otis Group Intelligence Scale, the Stanford Achievement Test, and Army Alpha were given to part of the group.

In addition to visits made to the homes the Chap-

man-Sims Scale for Measuring Home Conditions was used. Forty-five boys in the present group were studied by this test and they yielded a median score of 51.6, which Chapman and Sims classify as a "median high" score. Here again it is evident that our group is slightly, but not markedly, above the general average.

The major emphasis in this investigation was, of course, on behavior, since the purpose of the whole investigation was to study differences of behavior at various ages. Each boy was interviewed by the writer within one month of his birthday. That is to say, all the cases in the eight-year-old group were interviewed between the ages of seven years and eleven months and eight years and one month. In addition to this interview, the writer endeavored to keep a running record of the activities of each child. A great help in doing this was an experimental boys' club, of which the writer had charge and to which most of the older boys in the present group belonged. It was more difficult to secure continuous contact with the younger boys who had not yet reached the club age. In these cases considerable help was secured by interviews with parents and teachers.

Sixty-two of the group took the test for developmental age and made a median score of 106.9, showing that they were a little more mature than the average boys of their age on whom the test was standardized. This important fact must be kept

in mind in interpreting the results of the present study.

In Chapter I it was remarked that physical growth was cyclic in character. This fact was referred to as "the First Law of Growth." The subsequent chapters will show that this is equally true of growth in developmental age. It is not a continuous process from age six to age sixteen. It consists of at least three cycles, one characterized by individualistic play, the gang age, and adolescence. As in physical growth, there are periods of very rapid progress in developmental age, followed by periods of slowing up. As much progress may be made in the three or four months around puberty as was made in the two years preceding.

It will also be seen that what we have called "the Second Law of Growth" is verified for developmental age as well as for physical growth. That is to say, development is not merely quantitative but qualitative. The adolescent is not only more mature than his younger brothers; he is mature in a different way. He is not merely more interested in girls than his younger brother. He is interested in a different way. Feminine companionship has for him an entirely different meaning.

The chapters which follow will unfold the story of human development during the important ten-year period between age six and age sixteen. It is a complicated story of the action and reaction of little

understood forces which unite to bring around the remarkable transition from childhood to maturity.

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CHAPTER III

THE FIRST SIX YEARS

The unique importance of the preschool period arises from the fact that it comes before any other. The first six years of life are very significant, precisely because they *are* the first six years. Impressions received by the adult must struggle against earlier impressions; but impressions received by the young child meet no mental opposition.

The truth of these statements has been strikingly proved in recent years by experience with the criminal and the insane. Adult conduct disorders belonging in both these categories have time and time again been traced back through adolescence and childhood to maladjustments of the preschool period. Indeed, some extremists have seriously held that prenatal life exerts an influence on personality, while more conservative psychologists will readily agree that the first six years have an enormously greater effect on adult life than does any equal period.

The great educators of the seventeenth and eighteenth centuries were the first to emphasize the

significance of the preschool years. Comenius argued that education should begin on the mother's lap and he actually proposed a sort of preschool curriculum. Rousseau stressed the importance of studying the child himself. But Pestalozzi was probably the first to keep a diary record of a child's development, since he studied his own son in 1774 and based his theory of education, partly at least, on the material thus gathered.

The example of Pestalozzi was followed by a long series of investigators who kept diaries of the development of their own or other children. Tiedemann, in the eighteenth century, and Sigismund, Perez, and Preyer, in the nineteenth, are writers who belong in this category.

All the above studies are open to the objection that they were either theoretical or else they were based upon the observation of a very few children. Moreover, the children who figured in these early baby biographies were generally the sons and daughters of the writers. The early literature on the preschool child is thus based on scanty evidence and this evidence is largely drawn from children who are presumably much above the average in heredity and environment.

The work of G. Stanley Hall opened a new era in child study. Returning to the United States fresh from his experience in Wundt's pioneer laboratory, he opened the first psychological laboratory in the

United States at Johns Hopkins in 1883. In 1888 he went to Clark University, where he spent the balance of a long and fruitful life.

Hall first grasped the importance of basing generalizations in this field on a large body of evidence. This he attempted to secure by the use of questionnaires to be filled out by parents, or by asking adults to recall the experiences of their own childhood. Perhaps even more important than his own original work was the effect of Hall's influence in stimulating a number of young men and women to devote themselves to the new field of child psychology.

Two new techniques have radically changed scientific methods of studying the young child since the days of Hall's work. The intelligence test has given a relatively accurate measure for general intelligence and other mental abilities, while the case-study technique, drawing on the new discoveries of Freud and his co-workers, has given a new insight into individual behavior.

These new methods are applied very efficiently in our best nursery schools. The nursery school is essentially a place where children of preschool age come for a few hours every day for training and observation. While some nursery schools are little better than glorified day nurseries the best of these institutions are making a systematic and successful effort to learn more of the psychology of the young child. On their staffs are physicians, psy-

chologists, psychiatrists, social workers, and students of nutrition. The children are thus studied from various aspects by experts and out of these studies there is slowly growing up a scientifically satisfactory body of knowledge concerning preschool behavior.

Research articles, monographs, and books are being published in increasing numbers, adding little by little to our knowledge of the young child. There are yet many gaps in the picture but these are being rapidly filled. It is probably true that we have a more comprehensive scientific knowledge of the preschool years than we have of any later period of childhood.

Mental life does not begin absolutely at birth. It extends back for some months into the dimness of the fœtal period. Naturally, we do not know very much in detail about the mental life of the child before birth. Minkowski (16), however, has succeeded in throwing some light on this question. He studied seventeen living fœtuses between two and five months of age, which had been removed from the mother by Cæsarean section under local anæsthetic. Movements of the head, arms, and legs were noted. Various skin reflexes were observed, but tendon reflexes showed very little activity. In another study (17) the same writer found that the fœtal musculature responds to both galvanic and faradic current after the third month. Forbes (8) notes that the

fœtus will respond to a sudden loud noise a month before delivery.

At birth the human infant is extremely undeveloped. Cases have been reported (7) of infants born without cerebral hemispheres, and so rudimentary is the mental life of the infant that the absence of a brain was for some time not apparent in their behavior.

The entire mental equipment of the child at birth consists of a few reflexes and rudimentary abilities. The new-born child shows the knee, achilles, plantar, abdominal, pupillary, patellar, Moro (11), and other simple reflexes. To these may be added the various activities recounted by Blanton (2) who says, "During the first twenty minutes of life may be observed sneezing, yawning, tears, sucking at nipple, fixating on light, putting thumb in mouth, jumping to loud sounds, grasping, crying with box-shaped mouth, crying with corners of the mouth pulled down, following a moving hand with eyes, turning over when given a very slight advantage, complete erection of penis, and most indicative, perhaps, the cry of so-called anger immediately after birth." The above very nearly covers the entire mental life of the new-born infant. Sherman and Sherman (20) have shown that the rudimentary abilities of the newborn are imperfect and gradually improve during the first days of life.

Another characteristic of the infant's mental life

is its almost complete lack of central organization. Linfert and Hierholzer (14) found that even at one month there was a considerable intercorrelation between the abilities of infants. A child scoring high in one ability had a tendency to score high in others as well, thus implying the presence of some sort of general factor underlying all his varied capacities.

The present writer, however, found that there was practically no interrelation between the various reflexes present at birth. The average intercorrelation of eleven reflexes was only +.044. A closer analysis of the correlation table showed that a coefficient of even this size was due to the presence of comparatively high correlations between some related reflexes. Thus, there was a group involving the lumbar cord, another involving the cranial nerves, and so forth. When the correlations within these groups were eliminated the mean intercorrelation of the entire table sank to zero. In other words, although the newborn child has specific abilities involving different parts of his nervous system, there is no evidence of any general factor analogous to the "general intelligence" which psychologists find in older children.

The first six years of life produce in the child a most astounding change. At the end of that period he has acquired abilities which make him distinctly a human person. He can walk and talk, he can profit by formal education, he is capable of ethical

ideas. He has developed social relationships and has begun to play his part in the enormously complicated sphere of human social life. His mental capacity distinguishes him sharply from the balance of the animal world.

One of the first striking achievements of the infant is learning to walk. The average parent looks upon walking as an ability which is rather suddenly acquired soon after the child's first birthday. Recent intensive studies like those of Burnside (5) have shown that the matter is not quite so simple. It is true that actual walking is learned rather quickly but behind this achievement lies a long history extending back almost to birth. During this time the infant is gradually gaining control over his body, learning to coördinate his large muscles, and establishing his sense of equilibrium. It is only after this long and complicated process that he is able to attack the problem of actual upright locomotion.

Recent studies are beginning to throw some light on the details of this long educational process. The newborn infant is almost as limp as a rag. By the age of one month he has learned to lift his head when prone (14). After another month or so he can turn from his side to his back and at four months he can turn from his back to his side. It is only after another two months, however, that most infants can make the complete turn from back to stomach and stomach to back (14).

Most infants can crawl, according to Gesell, at four months (10). Jones (12) finds that the ability to sit alone makes its appearance in the average infant at about seven months. Two months later the great majority of infants can creep, make stepping movements, and stand with help. At the age of one year the child can stand alone and walk with help. By fourteen months two-thirds of all children are able to walk (22).

Other motor abilities pursue a gradual course parallel to walking. Thus, for example, according to Jones (12) eye coördination appears during the second and third months. Horizontal coördination comes first, to be followed by the vertical and circular types.

Even more striking than the ability to walk is the ability to talk. This, too, is acquired very gradually. The process begins when the infant learns to control the vocal organs in such a way as to produce certain sounds. Gesell says, "During the first day of life the ordinary listener could perhaps distinguish not any more than an 'eh and ah' in the audible behavior of the infant, but at the age of six months it requires diligent observation to record the wealth of vocalization which presents itself in the course of one day" (10, p. 213). Learning gradually how to produce these various sounds is the principal linguistic development during the first half-year of life. By the age of six months an event of great

importance has occurred, for Linfert and Hierholzer (14) found that at this time about two-thirds of all babies had learned to recognize their names. This perhaps represents the first vague association of meaning with a definite word in the child's mind.

In another three months further striking progress has taken place. Most children can say "mama" or "dada" or the equivalent. In the meantime the child has learned to understand at least a few of the phrases which are addressed to him. At the age of one year he is beginning to build up a vocabulary. Naturally it is a very restricted vocabulary. Linfert and Hierholzer (14) found that about two-thirds of their subjects could say more than one word at this age. Gesell (10) reports that most children know at least four words other than "mama" or "dada" at twelve months. Nice (18) places the average vocabulary at this age at seven words, while Smith (21) gives three as the average.

After the first birthday the acquisition of vocabulary proceeds apace. At eighteen months it has grown to seventy-one words according to Nice (18) and to 320 words at two years. Smith (21) finds the average vocabulary at two, three, four, and five years to be 272, 896, 1540 and 2072 words, respectively.

Growth in language ability is not, of course, merely a question of vocabulary size. It proceeds in many other directions as well. For one thing,

Gale and Gale (9) and Brandenburg (3) have found that the number of words used per day greatly increases during the preschool period.

Sentences generally appear before the second birthday and their length gradually increases until it has reached a figure of 4.6 words per sentence at the age of five (21). By the time he is three the child generally uses pronouns, plurals, and tenses (10). In the meantime his pronounciation has improved until it can be rated as "not infantile" in most children at the age of five years (10).

The infant's social development parallels his acquisition of the other abilities. He is born a solitary creature with little awareness of the other human beings about him. Bühler (4) reports that children of two or three months begin for the first time to notice each other, and Gesell (10) finds selective attention to the human face at four months. At six or seven months children react to each other by using each others bodies as play objects (4). At nine months Gesell states that most children react to their mirror image and "wave a bye-bye" (10).

At about one year a very important social relationship begins to develop. Linfert and Hierholzer (14) found that at that age children learn to inhibit forbidden acts at a peremptory "No, no" from the mother. This is the beginning of obedience, of social control, which is so fundamental in organized

society and in the moral life. In another six months the child has learned to inhibit forbidden acts habitually and not merely at the instant of the mother's command.

The child of two exhibits a greatly advanced social development. He shows affection, relates experiences, and imitates simple acts, for example, a man smoking, or the gait of an old person (10). The latter ability probably represents a rudimentary beginning of dramatic play.

During the preschool years most children pass through a period of negativism. That is to say, there is a period during which they systematically resist the suggestions, requests, or commands of their elders or even try to do the exact opposite. This resistance has been noted by many observers, but has never been adequately explained. Possibly it represents the child's first consciousness of his own individuality which he seeks to establish and to impress on the external world, by disobeying his elders. Levy and Tulchin (13) studied the child's resistance in the mental-test situation and found a maximum around the eighteenth month for girls and around the thirtieth month for boys.

During the preschool period the child acquires many abilities which are of importance in the routine of civilized life. For example, he learns to dress himself. At one year he can remove his shoes, at three years he can put them on, and at four years he

can lace them up, if he is an average child (10). Learning to button clothes is characteristic of the latter age.

At a year and a half the child can use a spoon without much spilling. At four years he can use a knife and spread jam on his bread. Bowel and bladder control are gradually established during the second year and should be complete, save for occasional lapses, by the second birthday (10).

The last type of development to make its appearance is the development of moral concepts. McGrath (15) was unable to find any moral ideas at all in two-year-old infants. But a year later she found many such concepts. Most children were able to name a number of actions as definitely "good" or "bad." It is rather interesting to note that this investigator found that obedience was the distinctive moral idea at this age, being twice as common as any other. Half of McGrath's subjects stated, at the age of three, that God made them, while at five belief in a future life was quite common.

The generalizations made in the preceding paragraphs hold true of the average child. There are, however, many individual exceptions. It is now known that vast differences of intelligence exist and that these differences are already present in early childhood. It thus happens that many children will be found to depart strikingly from the average course of development outlined above.

The very bright child shows his precocity in early infancy. Not only does he walk and talk earlier, on the average, than the normal child, but he shows his superiority even in such small ways as the early acquisition of motor control and the like. It is probably possible to diagnose genius very early in life. The reverse holds true of the retarded child. He is likely to learn much more slowly than his normal brother. Walking and talking occur later and his inferiority extends even to the minor details of mental life.

Intellectual superiority or inferiority is not the only point upon which the child may depart from the average. Even at this early age each individual is very distinctly himself. He has his own traits of character, his own peculiarities. Behavior difficulties are, therefore, just as common in the preschool child as in any other age and, although these maladjustments may appear unimportant in themselves, they take an extreme importance from the fact that they may develop easily into more serious difficulties in later life.

Many of the young child's behavior problems have to do with habit formation. For instance, there are many children who refuse to form good eating habits. They may take a violent dislike to certain types of food or may sometimes refuse to eat at all. Of course, many of these instances may be traced to physical causes, but there remains a large residue of cases in

which the child is perfectly well physically. In such instances the disorder may be due to emotional difficulties and will almost always yield to simple treatment. Such children should be given an adequate amount of plain, nourishing food. If they fail to eat it within a reasonable time it should be quietly removed without any comment or show of emotion. In nearly every instance the child will soon begin to eat of his own accord.

Where the problem is enuresis, physical causes should again be first eliminated. This difficulty is probably most often due merely to lack of proper training and may be cured easily when such training is given. The same is usually true of masturbation. Where handling of the genitals occurs in preschool children it is generally merely a physical habit and carries for the preschool child none of the moral implications which would accompany it in older children. It can generally be cleared up by simply distracting the child's attention from the habit. In only a few cases do sex practices among young children have an emotional value similar to masturbation among older children.

A difficult group of problems is furnished by children who indulge in temper tantrums. Such children react by an intense show of anger when their desires are thwarted. This is an infantile reaction and it persists only when the child succeeds in drawing attention to himself and becoming the center of

a scene. When parents refuse to become emotional over these outbursts they generally subside rather quickly.

It is essential that even in the preschool period the child should acquire a proper superiority-inferiority orientation. That is to say, he should learn to be neither overbearing nor too submissive. This implies that the parents must be able to assert their authority over him at any moment and yet must allow the child an adequate opportunity to display his own individuality. Failure to do this often makes children either arrogant or diffident. It goes without saying that either of these qualities is a severe handicap in later life.

In addition to the above there are, of course, many other individual variations of behavior. Some of these are due to unusual physical conditions such as encephalitis or epilepsy. Such cases, however, are rather exceptional and they need not be considered in a treatment like the present.

At birth man is perhaps the least developed of all animals, and it is particularly on this account that he is by far the most plastic. A young chicken will begin to pick and scratch shortly after emerging from the egg. He displays very little behavior analogous to what we call play. And precisely for that reason the chicken is destined to follow with very slight variation the behavior pattern of his ancestors.

Not so, the child. He exhibits almost unlimited possibilities at birth. He may grow up and adopt any of a thousand occupations. He may exhibit any of a thousand different types of personality. The wide individual variations among adults are due, no doubt in part, to inherited differences. But they are probably due in a vastly greater degree to training, and particularly to the training received during the preschool years.

It is for this reason that early childhood becomes so important. On his sixth birthday the child's character has already been largely formed for better or for worse. The succeeding chapters will describe the behavior of older children at various ages. But underlying all these reactions is the influence of the preschool period. The first six years lurk in the background in the description of the behavior of every older child.

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(10) GESELL, ARNOLD: *The mental growth of the pre-school child; a psychological outline of normal development from birth to the sixth year, including a system of developmental diagnosis.* New York, The Macmillan Company, 1925. x, 447 p.

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(11) GORDON, MURRAY B.: "The Moro embrace reflex in infancy." *Am. J. Dis. Children,* 38:26-34, July, 1929.

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(12) JONES, MARY COVER: "The development of early behavior patterns in young children." *Ped. Sem.,* 33:537-85, December, 1926.

The subjects were 365 infants in New York Baby Welfare Stations. Detailed norms are given for ten reactions.

(13) Levy, David M. and Tulchin, Simon H.: "The resistant behavior of infants and children. II. *J. Exper. Psychol.*, 8:209-24, July, 1925.

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(14) Linfert, Harriette-Elise and Hierholzer, Helen M.: *A scale for measuring the mental development of infants during the first year of life.* Baltimore, Williams and Wilkins Company, 1928. 33 p. (Studies in Psychology and Psychiatry, Vol. I, No. 4, June, 1928.)

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(15) McGrath, *Sister* Mary: "Some research findings in the moral development of the pre-school child." *Cath. Educ. Rev.*, 24:145-53, March, 1926.

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(20) SHERMAN, MANDEL and SHERMAN, IRENE CASE: "Sensorimotor responses in infants." *J. Comp. Psychol.*, 5:53-68, February, 1925.

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(21) SMITH, M. E.: *"An investigation of the development of the sentence and the extent of vocabulary in young children.* Iowa City, Iowa, The University, 1926. 92 p. (Uni. of Iowa Stud., Stud, in Child Welfare, Vol. III, No. 5.)

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(22) VARIOT, G.: "Sur les facteurs normaux et morbides qui peuvent avancer ou retarder le début de la marche

bipede chez les jeunes enfants." *Bull. and Mem. Soc. Med.*, 43:353-61, 1927.

Sixty-seven percent. of children walk between the age of eleven and fourteen months. The most important factor in the development of walking is age.

(23) WATSON, JOHN BROADUS: *Psychology from the standpoint of a behaviorist*. Second edition. Philadelphia and London, J. B. Lippincott Company, 1924. xvii, 448 p.

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CHAPTER IV

THE SIX-YEAR-OLD

THE sixth birthday marks a new period in the life of the average child. For at or about that age he usually begins his school experience and this places him abruptly in a quite new social setting. Before this time he has been guarded more or less closely by his mother's solicitous care. He has been a center of attention and he has not had to strike out for himself. But after he enters school he finds himself suddenly lost in a large crowd of his peers and he has to begin to fight his own battles. Of course, the details will vary widely from child to child, but it is a general truth that at about six the average boy has to break away from home and take his place in a relatively new environment.

By the age of six the boy is fairly well equipped to do this. According to the Public Health Service norms he should be some 45.4 inches tall and should weigh about 47.5 pounds. This means that he has more than doubled his height since birth and it has reached more than one-half of what it will be in adulthood, while his weight has increased four or five times and has reached about one-third of the adult

norm. Not only do these gross measurements represent great progress since birth, but the proportions of the child's body also begin to show a certain maturity. At birth the length of his head was about one-fourth of his entire body length. Now it has become relatively only half as long. The length of the legs and arms has increased and the contour of the hips is like that of an adult.

The child is gaining in resistance against disease, yet measles, whooping cough, chicken pox, and respiratory disorders reach a maximum at or about this age. This period is then characterized by an extreme liability to the infectious diseases of childhood. Possibly this fact reflects the increased possibilities for infection among children entering school (3, 4). Children of six and under lose more days of school per year on account of sickness than do children of any other age (3).

It is impossible to speak about mental growth in the same absolute terms which were possible in describing the growth of physique, yet here, too, it is evident that the child has made great progress. Now for the first time his mind is mature enough to allow him to profit by formal education. He begins to speak with a non-infantile articulation. He can give crude definitions of simple words and he begins to learn to read. He has long since learned how to dress himself and he can be trusted to exercise caution in crossing streets through traffic. He is able

to guard himself against common physical dangers. He has reached a stage of mental development equivalent to that of the adult imbecile (7, pp. 161-63).

When the six-year-old comes to school for the first time he is having in a sense his first contacts with society. But in spite of this new realism he still clings passionately to the autistic thinking of early days. Dramatic play is still the characteristic recreation of the boy at six and it is only by degrees that the new thirst for reality manifests itself.

Many, in fact, believe that the dramatic play of the young child is caused largely by his early contacts. Like everybody else, the six-year-old likes to assert his own individuality. He likes to be somebody. He wants to make things happen. But these desires find little room for expression in the real world. Nobody pays much attention to his wishes while he, on the other hand, must obey everybody. And so the desire for self-expression works itself out in the world of make-believe. The little girl finds that no one obeys her, so she plays house and orders her dolls around. The boy who must eat spinach against his will and go to bed at 7:30 puts on a cowboy suit and becomes a bold, bad man in the back alley.

This theory is illustrated by an interesting incident related by Baldwin and Stecher (1, p. 249). During a rest period in the Iowa Preschool Labora-

tory little Frank refused to lie down. The teacher thereupon took hold of him firmly and laid him down. This closed the incident as far as the school was concerned, but that night Frank played with his toy buffalo at home. He said, "Lay down, Buff," several times. Then he said to his mother, "Buff bad, Buff won't lay down." Thereupon he went over and laid the toy buffalo down just as the teacher had laid him down in the afternoon. The boy repeated this play several times.

Whatever the ultimate basis of dramatic play may be, there is no doubt that it occupies a large part of the time of the six-year-old. Consider, for instance, the cases of George and Harry:

Case 3. George is a sturdy little youngster with thick black hair and a ruddy face. He is neatly dressed and—within reasonable limits—clean. He is tractable, pleasant, and not unduly bashful in the presence of adults.

On visiting the boy's house the writer noticed a pile of chairs, boxes, and sofa cushions in the corner of the living room. From this George presently emerged after the manner of an Eskimo from his igloo. In George's imagination the chairs and sofa cushions were a house and he and a couple of his cronies were playing there.

This lad's dramatic play shows quite a variety. Sometimes he is an Indian or a cowboy or a soldier. Sometimes he is a farmer. Sometimes, turning his

back on the great open spaces, he imitates the more prosaic reality of the city streets and plays ash man. "The bed's the truck and some dirt's the ashes."

At times George's dramatic play takes a mercantile turn. He plays "down town." He gets some old sweaters and becomes a salesman, while some of his friends come in to buy a new fur coat as he has undoubtedly seen his mother do. Or else he is a banker or a "groceryman" or an engineer. In fact almost any adult occupation is grist to the mill of the six-year-old.

Case 4. Harry is a pale little boy, clean but somewhat untidy as one is apt to be when one lives the free, informal life of the six-year-old. He talks rapidly and not quite coherently. His home is a good one and his parents intelligent.

One of Harry's principal recreations is playing house, or "fathers and mothers" as it is called in his neighborhood. Since the dramatic play of the child regularly imitates the activities of his elders it is altogether natural that it should also mimic home life, which is the form of adult activity with which he is most apt to be in contact. The same observation applies to playing school. When a tiny boy or girl becomes a teacher in play it is merely an imaginary assumption of a form of adult authority to which he has become only too well accustomed.

Sometimes Harry and his friends become "traffic cop men" and the stream of wagons and "skooters"

is controlled by a six-year-old policeman. Sometimes he plays gardener. "We get some old dead flowers and plant them in the grass like they're growing."

Playing "fathers and mothers" was the most popular form of dramatic play in the present group. At least eighty-one per cent of the boys who were studied acknowledged this particular activity. Freudians would undoubtedly assign an erotic basis for this fact. But this is probably unnecessary. The popularity of home life as a subject for dramatic play is probably due merely to the fact that it is the form of adult life most immediate to the six-year-old. It is also the form most likely to be involved in the compensatory mechanisms of dramatic play. The child feels the goad of authority most frequently at home and is likely to compensate by himself becoming one of these dominating parents.

After home life the most frequent subjects of imitation were other adult activities observed by the children. For instance, they played school and store, or became firemen, policemen, or street laborers. Next in order of popularity were real activities more remote from the children's actual experience. To this category must be assigned the imitation of soldiers, Indians, aviators, cowboys, and the like. Another and rather unusual form of dramatic play was the imitation of purely imaginary beings (one of the boys liked to play Santa Claus) or of animals.

There was, then, a considerable variety in the dramatic play of the six-year-olds but one hundred per cent of the children indulged in it in some form or other. It would probably be possible to find an interesting correlation between the type of dramatic play and the personality of the child. It seems to be a general rule that the more timid and introverted boys indulge in a wider variety of dramatic play than do the others.

The six-year-old is not above playing with toys. This type of activity is, in fact, merely a part of his dramatic play. Toys are the "properties" of the six-year-old's dramatics. It is easier to play railroad if you happen to have an electric train. For similar reasons toy trucks and autos and airships, toy steam shovels and fire engines are popular at this age. It should be noted that the best toys are, in general, those which are most elastic in the possibilities they offer. A toy fire engine is a fire engine and nothing else; but a box of blocks offers unlimited possibilities. With them you can make a house or a ship or an army of soldiers. Children prefer the more flexible type of toy. This has been the experience of teachers in nursery schools who deal with children when the dramatic age is in its flower (2, 8).

Not only formal toys but almost anything may serve as a peg on which to hang dramatic play. Once a youngster of six told me that he was fond of books.

Thinking that interest in literature was rather unusual at his age I asked for further details. He went on to explain that he liked books because "you can make trains with 'em." On the same principle the living-room sofa becomes a battleship, a kitchen chair is metamorphosed into a fiery charger, and the backyard into a pirate's lair.

Closely related to toys are materials for physical activity. One boy in the group boasted of a set of carpenter's tools. One had a blackboard and several spoke of liking to draw. Drawing is itself a sort of dramatic play. One represents things as one would like them to be. This shades off by imperceptible degrees to truly artistic activity.

Table games are popular at six. These are naturally not of a very complicated sort. Cards are still a little above the child at this age but he may enjoy some of the simpler games such as Lotto or the various patent table games which appear on the market from time to time.

Compared to his ten-year-old brother, the boy of six is a relatively quiet person. He is much more apt to be content to play passively with his baby sister. However, even at this early age the love of active sports begins to be manifest. True, he may allow his sister to play baseball with him, but it is baseball just the same. In our group nearly all the boys mentioned baseball and football among their sports. One must remember, however, that these

youngsters play their baseball with a difference. They never play on teams against other teams and they seldom play an organized game at all. They are much more likely to throw and bat the ball around in an utterly informal manner. In the field of children's play the word *baseball* covers a multitude of activities. Much more characteristic of the boy at six are a variety of "games of low organization" as they are called by play leaders. These are the traditional running and chasing games which are handed down from generation to generation of children—hide-and-go-seek, tag, run-sheep-run, and a dozen others.

The perfect epitome of these games is tag. Tag is the great outdoor sport at six and most of the other games popular at this age partake more or less of the tag principle. It is somewhat difficult for an adult to realize the hold which tag has on the boy of six. The writer was present one day when a play leader was working with a group of six-year-old boys in a school hall. He had the group seated in chairs at one end of the room. Then he picked out half a dozen boys and told them to play tag. They did this readily enough, but what surprised the writer was the effect upon the audience. Every last boy stood up and cheered in the wildest excitement at the spectacle. It could only be compared to a football crowd with the ball on the one-yard line. To the boy at six, tag is not merely an interesting activity.

It is the king of sports; it is the great American game.

The group of seventeen boys studied boasted of eleven "skooters," seven wagons, five tricycles, three pairs of roller skates, and two bicycles. In this particular group the "skooter" was evidently the most characteristic form of locomotion. For the benefit of the uninitiated reader let it be explained that this contrivance consists essentially of a board with wheels at the front and back and an attached handle. The rider puts one foot on the "skooter" and propels himself with the other foot, holding the handle in the meantime. "Skooters" may be bought at stores or may be constructed from dismantled roller skates.

The following cases will serve to illustrate some characteristic activities of the six-year-old:

Case 5. Frank is an untidy youngster in a sailor suit which once was white. He is moderately bold and talks without much bashfulness. He interrupts the interviewer to ask questions. Altogether, Frank seems to be a fairly self-assertive and extroverted youngster for his age.

In spite of his blasé air the boy is not above playing with girls and indulging in dramatic activity. He plays house and enjoys his toy airplane, steam shovel, and truck. He likes hide-and-go-seek, keyhole, and other informal games. He received a set of boxing gloves for Christmas and finds the resulting sport very pleasant.

Frank enjoys the movies. This represents a certain maturity. Only about one-half of the present group attend movies regularly. When they do, their interests, like Frank's, are apt to center around the comedies and pictures of adventure.

Case 6. In contrast to Frank, Edward is a noticeably neat little somebody. He has light brown eyes and an abundance of freckles. He wears his striped four-in-hand tie with a certain air.

As is usually the case with boys of his age, Edward's predominant activities are dramatic. He plays house and plays store or he becomes an ambulance driver and carries the wounded around in his cart. Again, he plays fire engine or builds a gasoline station in his back yard. On rainy days a set of blocks furnish an outlet for activity and he builds houses on the living-room floor.

Boys and girls mingle freely in the set in which Edward moves. They race around quite informally, play baseball or football together, or hide-and-go-seek. Sometimes they play ring-around-the-rosy—this latter possibly a concession to feminine weakness. Edward likes the movies and he prefers pictures dealing with adventure. This represents an interest somewhat more mature than is usual at six.

Eighty-eight per cent of our group admitted playing with girls. The relationship of boys and girls during the age of dramatic play is essentially different from the same relationships at adolescence.

These two ages are separated by an intermediate period, the gang age, during which there is a noticeable antagonism between the sexes. During the early period of which we speak, extending up to the age of perhaps ten or so, boys and girls play together on a basis of something like equality. They have the same interests and amusements, and fight and play with each other without much sex consciousness. It would probably be too much to say that there are no traces of eroticism in this relationship, but it is certainly true that anything like the sex consciousness of adolescence is quite absent.

By the age of six this ingenuous *cameraderie* has already passed its zenith. The boy is becoming a bit sensitive about the fact that he plays with girls. He is just beginning to be proud of his masculinity and to feel that female companionship derogates from it. At this age boys do not admit girls to *all* their relationships. At six, there is already a beginning of a new and more masculine era. The boy is more apt to play with girls when he indulges in activities reminiscent of the preschool age. It is not surprising, therefore, to find that six-year-old boys and girls play together mostly at dramatic play. The nature of the relationship may be well illustrated by a couple of cases.

Case 7. Albert is a tiny youngster of serious mien. His clothes are a bit disarranged and his face might be improved by washing. He speaks slowly and in a

low tone and answers the most casual questions with the air of one reluctantly breaking bad news.

Albert has quite a list of girl friends. With them he indulges in dramatic play and enjoys playing house. He also plays some of the standard informal games of children, such as tag, buck-buck, and hide-and-go-seek.

Case 8. Gregory is a lad of superior intelligence according to the Binet Scale. He wears a Dutch clip and presents an attractive appearance in his neat and scrupulously clean clothes.

The boy plays house with his feminine acquaintances, that goes without saying. But he also has a wide repertory of other dramatic activities. He imitates firemen and storekeepers, and all sorts of adult occupations. Gregory is not above playing in the dirt with his girl friends or even getting down on all fours and becoming a lion or a tiger for their benefit.

The boy at six is in the midst of a period of transition from the dependence of the preschool age to the assertive individualism which succeeds. Rugg, Krueger, and Sondergaard in a study of twenty-seven kindergarten children, averaging about five years of age, found that the most frequent topics of conversation were concerned with self-assertion (11). At the age of six the same thing is largely true.

This growing individualism is a phase of the process of breaking away from home, through which

every child must pass. Dexter, speaking from a wide experience, says:

"Upon entering school every child has a threefold adjustment to make: he must learn to accept authority, to accept the competition of the classroom, and to find satisfaction in doing things for himself" (5).

It would probably be possible to generalize this statement somewhat. Whether the child is attending school or not he feels an inner urge toward a new independence.

This process does not take place at a uniform rate in different boys—a fact which is responsible for certain anomalies of development. In a random group of six-year-old boys there will always be some who will show a too great dependence on home, while in others the reverse is true and they show an unwelcome independence which is equally undesirable. The following are cases in point:

Case 9. Oliver is a tiny lad of rather foreign appearance. He wears a ring and patent leather shoes and his white shirt is plaited.

The boy is very timid. He never speaks in school and it was only after months that his teacher could induce him to recite. He never mingles with the other boys nor takes part in their games. During an interview he was very slow in answering and did so in a scarcely intelligible voice.

Oliver's amusements show the same immaturity.

His chief activities could be classed under dramatic play, such as playing house, school, cowboys and Indians. His young sister was one of his chief companions.

Case 10. Philip impressed his teacher as being very much like Oliver. He, too, was very quiet and repressed, never made any trouble in school, and seldom joined in active sports in the school yard. During an interview he spoke in the tone of one about to burst into tears.

Philip denied playing with girls, but he told of a large variety of dramatic play. He liked to play soldiers and to play school. He would build houses in his back yard, and the back porch would become a boat at the touch of his imagination. Active sports like playing ball or climbing trees were mentioned but evidently held a minor place in his esteem.

Case 11. All his teachers agree that Ernest was a "case." He was the direct opposite of Oliver and Philip. Although his IQ was 117 on the Binet Scale he was a continual problem in the classroom. Yet his teachers found it difficult to dislike him with any enthusiasm, because almost immediately after a severe punishment he would walk up the aisle to the desk and gravely state, "Tomorrow is my birthday, teacher," or something of the sort. One day when a distinguished educator was visiting the school Ernest presented himself at the office with the statement that he would like to meet Miss So-and-So.

Apparently this was quite his own idea and he did it as though it were merely what good form demanded.

Ernest's play life is singularly rich. He still enjoys dramatic play with girls, but he also has a number of amusements which are distinctly more mature for his age. He likes boxing and roller skating and other strenuous activities. He seems to be as much accelerated in the growth of personality as the other two boys are retarded.

This brief survey of the psychology of the six-year-old will serve to illustrate the fact that the age of six is one of the crucial periods in the child's life. We have long since learned to look upon adolescence as an important nodal point and we have begun to shape our policies with this fact in view. But we are only beginning to realize that there are other nodes in the child's life less important than adolescence, perhaps, and yet possessing a certain significance of their own. The age of six is one of these points. It generally marks a transition from home to school and the beginning of contacts with the social group. It nearly always implies the growth of a new independence of character. We ought consciously to provide for these things. It is very important from the standpoint of mental hygiene that the child should adjust himself adequately to the school situation. Maladjustments at this age are likely to grow worse as time goes on. There is a

great field for good research work on the personality of the young school child. For a thorough insight into his psychology would undoubtedly result in the introduction of methods making for better mental hygiene at all ages.

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CHAPTER V

THE EIGHT-YEAR-OLD

The eight-year-old is an individualist. A growing self-assertion is one of his outstanding characteristics. He is gradually losing interest in the coöperative dramatic play which was once his chief amusement, and he is as yet incapable of the intense coöperation which characterizes the gang age. Games which stress individual competition are now his most characteristic form of play.

Lee has coined a name for this period which fits it perfectly. He calls it "the Big Injun Age." And indeed the psychology of the eight-year-old shows a striking resemblance to that of the Indian of fiction, if not the Indian of fact. The boy at this age wants to be Lindbergh or Captain Kidd. It makes small difference which. The essential point is that he must be a dramatic and striking figure. "At this period," says Lee (10), "it is a rule of life that no inferiority shall be admitted in any manifestation or accessory of greatness, of whatsoever sort. The power of unblushing assertion, so valuable in business and social life, receives its first development at this tender age."

It must not be supposed that this increasing individualism excludes all interest in dramatic play. On the contrary, the psychology of the eight-year-old is a strange mixture of the old and the new. The bold, savage Indian suddenly pauses in his activities to play house with his little sister. The boisterous excitement of the playground alternates unaccountably with an interest in Santa Claus. The boy's taste in literature is broad enough to include both Frank Merriwell and Bre'r Rabbit.

An increasing physical growth keeps pace with the eight-year-old's psychological development. His weight averages 52.8 pounds, according to Davenport, while the United States Public Health Service norms give a weight of 54.5 pounds and a height of 48.8 inches. Collins (5) reports that a boy of this age loses on the average 9.006 school days per year on account of sickness as contrasted with 11.893 at six.

Case 12. Edmund is a fairly typical case. He is a very neat little boy who at first is inclined to be shy and reserved in the presence of adults. After a little tactful persuasion, however, he opens up and freely discusses the things he likes to do.

Like many boys of this age, Edmund enjoys baseball and football. Even superficial observation, however, reveals the fact that these names do not denote the standard team games in his case. Baseball for the most part means playing catch; and football

means kicking the ball back and forth. The coöperation of team play is still too mature for Edmund.

More characteristic of the lad are games of low organization, such as "hide-and-seek" or "buck-buck." Most of these traditional games which are handed down from one generation of children to another in the neighborhood give a minimum of opportunity for coöperation and teamwork and a maximum of opportunity for individual exploit. They suit the eight-year-old phychology exactly.

Edmund is not entirely averse to playing with the other sex. He plays jump-rope with his feminine companions and even joins them in playing "fathers and mothers."

Case 13. Mark is not so neat as Edmund. His light brown hair is in disarray; his face and hands stand in need of washing. His school teacher reports that he is a classroom problem in spite of his intelligence quotient of 112.

Mark lives on the outskirts of the city and there the free, individualistic play of his age finds plenty of opportunity for outlet. Besides baseball and football he is fond of a large variety of such sports as tag, hide-and-seek, cops-and-robbers, and cowboys-and-Indians.

In spite of this vigorous, outdoor play Mark betrays his immaturity by his willingness to play house with girls, his interest in toys, and his preference for fairy tales and animal stories. In a word, he shows

the mixture of individualistic and dramatic play, which is characteristic of his age.

In the case of Edmund and Mark it will be noted that individualistic play frequently took the form of the so-called "games of low organization." This is quite characteristic of the period. Among the games belonging in this category, played by our group, the following may be mentioned as typical examples: Cops and thieves, hide-and-go-seek, buck-buck, run-sheep-run, red light, hit-the-stick, candy buck, baby-in-the-hat, and blacksmith. These and many similar games are handed down from one generation of children to another. Their origins are lost in obscurity. They have grown in the same slow, mysterious way as many of our adult social customs. They are true folklore.

The standard game books include a number of activities suitable for eight-year-olds. These modern games have, in common with the traditional ones, the fact that they may be carried on with little organization and direction, and that they involve more opportunity for individual effort than for social coöperation. Yet these modern games have never supplanted the traditional ones. Tag and hide-and-seek are as popular to-day as they were a generation ago. At age eight they are more fascinating than baseball. This was true in the case of Theodore.

Case 14. Theodore is an interesting little fellow, with brown hair and light blue eyes. He is dressed

attractively and wears a sport sweater, blue trousers, and sport socks.

He confesses that he does not know how to play baseball, although he can play some football—"not very good, though," he adds truthfully. On the other hand, the traditional games of low organization are very attractive to him. He plays tag, red light, baby-in-the-hat, blacksmith, hide-and-seek—all with enthusiasm. His companions in these sports are boys for the most part, although sometimes he does play with his sister.

The rest of Theodore's play life is quite characteristic of the eight-year-old. He enjoys his toys, especially a toy truck, aeroplane, and a box of blocks. He likes to draw and go to the movies. Formerly he had some pets. "I used to have a dog and I used to have a cat, but now I ain't got nothing."

Not all boys are so ignorant of the team games at age eight as was Theodore. A great deal of energy is absorbed at this period by baseball, football, basketball, and similar sports. But the eight-year-old plays these games in an entirely different spirit from his older brother. Once an eight-year-old told me that he enjoyed baseball and I asked him what position he liked best. Without a moment's hesitation the lad answered, "I like to be batter-up." This is a perfect illustration of the eight-year-old's attitude toward our national game. The fascination is not in being on the winning side. The urge is rather

to star one's self, to be the center of a dramatic situation. The eight-year-old does not want to play right field. He does not want to sit on the bench. He wants to stand up at the plate and hit home-runs.

Case 15. Donald has an intelligence quotient of 127. He is, therefore, a boy of unusual mental ability, but there is little about his appearance which would reveal this fact to the casual observer. His freckled face, his tousled hair, and his somewhat disarranged clothes do not present the traditional picture of an embryonic genius.

Donald plays baseball, football, and basketball, but his major interests are elsewhere. He enjoys tag, hide-and-seek, cops and thieves, and games of that sort. He has an erector set and other toys, and a wagon in which he rides on the sidewalk.

With girls Donald likes to play house, a drama in which he enacts the father's part, while dolls serve as babies. Thus dramatic play and games of low organization play a larger rôle in Donald's life than do the standard team games.

Case 16. Willis likes to play tag, hide-and-seek, and run-sheep-run. He enjoys the movies, reads a little, and can ride a bicycle. His red hair and freckles would do credit to the boy on a magazine cover.

The lad has a real and enthusiastic interest in baseball, which contrasts with Donald's somewhat

tepid participation. Together with a group of other lads Willis is engaged in constructing a baseball diamond on a near-by vacant lot. The group have spent considerable time leveling off the field and they have discovered some large pieces of concrete which are to serve as bases. It must not be thought, however, that the boy's interest in baseball is the same as that of his older brother. He plays on no organized team and he prefers "two knocker" to the regulation team game. In spite of his interest in this comparatively mature sport, Willis is at heart still an individualist.

At the age of eight most boys enjoy the movies and they are beginning to take an interest in recreational reading. The latter, of course, is considerably limited by lack of reading ability. Only the most intelligent boys of this age can enjoy a story book. The movies, however, impose no such limitations. They speak a language intelligible to every one.

The taste of the eight-year-old in the movies seems to be governed by the same impulses that determine his play. His preferences lie in the direction of films which flatter his individualism. For this reason, presumably, adventure pictures of various sorts were mentioned more frequently than any others by members of our group. The individualistic lad of this age wants to be a hero and, when he is not striving to be such on the playground, he likes to indulge his impulses in his imagination. He

identifies himself with the central character of some film and thus the movies serve as a means of imaginal wish-fulfillment.

Comedies were second in popularity in our group. Apparently the universal impulse to enjoy the ludicrous finds expression among these youngsters. It need scarcely be added that their conception of humor is not very subtle; but slapstick comedy and broadly humorous topics are enjoyed. It has been said previously that the psychology of boys of this age is a strange mixture. In contrast to his self-assertive individualism the eight-year-old shows a number of very immature interests. And so at the movies we find him enjoying Jackie Coogan as well as Tom Mix, and the animal stories as well as highly colored adventures from the Great War.

Dramatic play has not lost its fascination at age eight. Sixty-seven per cent of our group give clear evidence of typical dramatic play. It is probably true that it was a factor in the amusement of the other thirty-three per cent as well. That is to say, imagination probably figured largely in their sports. The boy who plays catch in the back alley, imagining in the meantime that he is Joe Bush, is exhibiting another variety of the same impulse which leads his small brother to dress up in his cowboy suit and play that he is Buffalo Bill. The following case shows the activity of the dramatic impulse in an eight-year-old:

Case 17. Franklin looks somewhat disheveled. His clothes are frankly dirty and so are his face and hands. He looks unkempt, neglected, and a bit pathetic. His father and mother are separated and he is living with the former. It is possible that the child compensates by his dramatic play for the lack of a normal home life.

Franklin plays football and some of the standard informal games, such as tag and hide-and-go-seek, but his deeper interest seems to be in dramatic play. He likes to play that he is a fireman or a policeman. Again, he migrates with his companions to a neighboring woods and builds houses there. Or else he gets sticks to serve as guns and plays soldiers. The boy has a few simple toys. For Christmas he hopes to get, among other things, a tool chest, a drum and bugle, an air gun, a cowboy suit, and a set of toy soldiers. It will be readily seen that these wishes represent accessories which will help Franklin with his dramatic play.

At least seventy-three per cent of this age group play with girls. The severing of the sexes will not come before the gang age. Although the boy of eight allows feminine participation in his more active sports only occasionally, dramatic play is a common ground on which the sexes meet. In fact, the girls, rather than the boys, are apt to take the leadership here.

Case 18. Horace is a pretty youngster. In fact,

he is a bit too attractive to be thoroughly masculine. He actually has dimples—and stranger still at this age—clean face and hands.

The boy's companions are principally of the feminine gender. Three girl cousins are his constant companions. With these girls he plays house, tag, old mother witch, and other games to be classified partly as dramatic play and partly as individualistic activity. Horace adds, "Gladys calls me a little sissy just because I play with my little cousin with paper dolls. That ain't nothing, is it?" One is inclined to agree with Gladys.

Of course, Horace is hardly a typical example. He plays with girls much more than the average boy of his age, yet he illustrates in exaggerated degree a trait which is common in the present group. Not all boys of eight are as effeminate as Horace, but few of them are too masculine to play in the sand with a younger sister.

As one might expect, boys at eight differ very greatly among themselves in maturity. Some show an immaturity reminiscent of the preschool age, while some seem to anticipate the psychology of the gang age. In speaking of the psychology of the eight-year-old it is very necessary to remember that we are speaking of an average. Individuals in the group may depart from this average rather widely.

Case 19. Nicholas says that when he plays baseball he prefers "sides" to "two knocker." This in

itself implies a certain maturity. When the team becomes more important than the individual, then one may be sure that the gang age is not far away.

This maturity runs all through Nicholas' play life. He enjoys the individualistic games characteristic of this age, such as tag and hide-and-go-seek, but they do not seem to loom so large in his life as the standard team games. On the other hand no appreciable element of dramatic play is discoverable. His whole personality impresses one as being distinctly boyish, whereas there is a definitely feminine element in the character of most boys of this group. There can be no doubt about it. Nicholas is a real boy.

Case 20. Patrick never plays with girls. He is very emphatic about that. Indeed his masculinity is offended at the suggestion. Dramatic play has no fascination for him. Patrick would rather punch the bag than play house.

The prevailing amusements of this boy are such informal sports as hide-and-seek, hit-the-stick, run-sheep-run, red light, and the like. Evidently he has not yet arrived at the gang age, but on the other hand the absence of dramatic play and his attitude toward girls show that it is the beginning of the end.

Cases like Nicholas and Patrick reinforce the principle already laid down, that chronological age and developmental age do not necessarily keep pace. In studying the psychology of the eight-year-old we must keep this fact constantly in mind. The gen-

eralizations which apply to the average boy of this group are subject to exceptions. Nicholas and Patrick show how behavior at age eight may approximate that of an older boy. The contrary tendency is exemplified by Stephen and Andrew.

Case 21. Stephen never plays baseball. Sometimes he throws a football back and forth on the sidewalk, but that represents the sum total of his participation in the standard team games. On the other hand, his dramatic play shows a rich variety. He plays train with his wagon; he plays school; he plays house. In the latter activity he is quite ready to impersonate the mother with the immature child's careless disregard of gender.

The informal sports such as tag and the like play some part in Stephen's life, but he much prefers quiet games like dominoes or button-button-who's-got-the-button. He enjoys his toys and electric train.

Case 22. Andrew uses big words. He is not embarrassed in the presence of adults. He is the kind of a youngster whom a loving mother likes to exhibit to visitors. Andrew enjoys dramatic play a good deal. He plays house or school and even plays fairies with some of his girl friends.

The behavior of Stephen and Andrew would be quite normal at age six. At age eight, however, it shows a definite retardation. Both these boys are indifferent to the team games. They are enthusiastic

about dramatic play and they make little sex distinction among their playmates. Both of them also show the gentle and somewhat effeminate type of personality, which is reminiscent of the preschool period, whereas Nicholas and Patrick suggest the more masculine personality of the gang age.

Age eight stands midway between the immaturity of the preschool period, which has passed, and the social coöperation of the gang age, which is to come. In the next group to be studied the influence of the gang age will have made itself felt and a nascent manliness will give promise of the adolescent period which is to follow, but at age eight the boy is still very much a child.

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CHAPTER VI

THE TEN-YEAR-OLD

THERE is a time in the boy's life when team games become more interesting than individualistic play. He would rather play right field on the winning team than star for the losers. Not only in his play, but in his whole life the group dominates. He is eager to join clubs and gangs and he feels that he is now too old to play with girls. It is the beginning of the gang age.

In a considerable proportion of boys this psychological change takes place at about the age of ten. The ten-year-old group, therefore, is rather sharply divided into two parts. Some lads still show the immature characteristics of the younger boy, while others manifest the distinctly new maturity of the gang age. These two types are illustrated by Malcolm and Lester.

Case 23. Malcolm has very light hair and light blue eyes. He is rather timid and quiet, and somewhat embarrassed in the presence of adults. His face wears a serious expression. When asked the names of his favorite playmates Malcolm mentions five girls and four boys. Evidently he does not dis-

criminate against the fair sex in his recreation. On the contrary, he jumps rope with them and plays house or school. With boys he enjoys tag and other individualistic sports, or else he plays catch or kicks a football.

It is quite evident that Malcolm's preferences are very closely similar to those of the average boy of eight. He has the younger boy's interest in dramatic and individualistic games and he shows no trace of the team spirit. But Lester presents a different picture.

Case 24. Lester is large for his age and accelerated in mental development, as a Stanford intelligent quotient of 115 clearly shows. He is an active boy bubbling with energy.

This lad is a member of a well-defined group. Two other boys who live near him are his inseparable companions. Besides this, he shows the same impulse toward group life by his very regular attendance at a local boys' club. He never plays with girls.

Lester's greatest interest seems to be centered in the team games. He plays them all very well. He enjoys both indoor and outdoor baseball and he is a guard on a regularly coached basketball team.

The contrast between Malcolm and Lester is very striking, but it is characteristic of the ten-year-old group. Boys of this age may be either immature like Malcolm or they may show the awakening gang spirit which characterizes Lester. Of course, these

two cases are somewhat extreme instances. The contrast is not always so sharp as this. The difference is very real, however, and it will be easily discovered by careful observation.

This difference shows up very sharply in practical club work. Most normal boys of twelve like to join clubs and play team games, but at ten this is by no means the case. Some join readily enough but some, on the other hand, apparently feel no attraction for such activities. The difference is strikingly apparent to any play leader who has tried to organize the recreation of a group of ten-year-olds.

This sharp division is not recognized by all child psychologists. Some consider age ten to be in the midst of a homogeneous period. Others, with whom the present writer agrees, recognize a nodal point at or about age ten. These latter writers believe that this age ushers in a definite period lasting up to puberty.

Hall is probably responsible for the theory that age ten is in the midst of an era. He calls the period from eight to twelve "preadolescence" (7). The authority of this great leader in the field of child psychology has attracted a number of followers. Kirkpatrick (8), for example, contends that there is a relatively homogeneous age period extending from six to twelve, and Mudge (12) follows a somewhat similar theory. This view is probably responsible for the fact that the Boy Scouts of America do not admit their members until age twelve. They look upon this time age as a transition point.

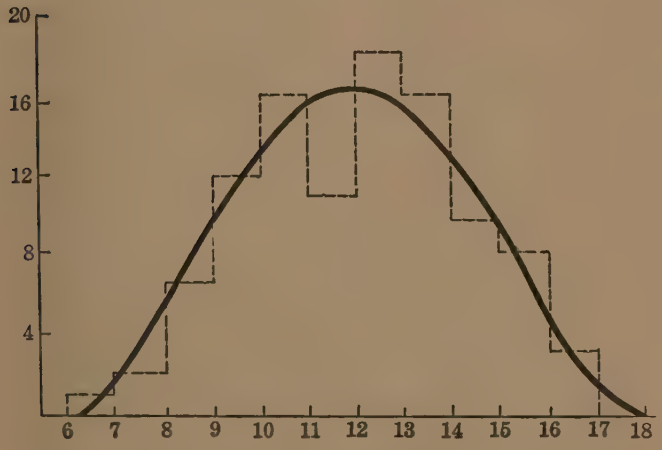
On the other hand a number of authorities recognize some sort of a gang period beginning at or about ten. Puffer (14), in his study of gangs, reports that they are characteristic of the age from ten to sixteen. Fiske (4) speaks of a "gang period" extending from ten to fourteen. W. S. Hall (13) calls the period from ten to fourteen "preadolescence." Lee (9) probably has the same thing in mind when he calls the years from eleven to fourteen the "age of loyalty."

There is evidently a sharp difference of opinion here between distinguished authorities. It is natural to ask in such a case what the evidence can be which has led to this marked divergence of view. On examining the literature it is rather discouraging to find that such evidence is almost wholly wanting. These writers seemed to have based their opinions on uncontrolled observation. There is a striking dearth of objective evidence.

This is unfortunate, for there is no reason why such evidence should not be made available. There is a fertile field here for research. In the meantime the present writer (5) is able to report the results of a preliminary study of this subject. Although the investigation was not sufficiently extensive to make large generalizations, it is believed that it gives a valid technique which can be applied to the solution of the problem.

In the cases on which the study in question was

based, the most easily observable and characteristic mark of the gang age was the willingness of the boy to join the Scout type of club. An experimental troop of Boy Scouts was therefore formed and—since the Scouts do not admit boys under twelve—a pack of Wolf Cubs as well. The latter are a junior variety of Boy Scouts whose activities are closely parallel to those of Scouting. The accompanying diagram gives the actual distribution of the ages of the members of these two clubs, taken together with a smooth curve fitted mathematically to the histogram.



THE RISE AND FALL OF THE GANG AGE.

Diagram showing ages of boys in two gang-age clubs. Dotted line shows actual distribution. Smooth line is a Pearson Type II curve fitted to the data. From the author's *Gange Age,* page 11.

It will be seen that the interest of boys in the gang type of activity is a gradual growth and at age ten it has become rather general. Although the exact time of the transition to the gang age evidently differs rather widely in different boys, it roughly characterizes the period from ten to fourteen. It is impossible to interpret this diagram in the light of Hall's psychology. He placed a dividing line at age twelve—precisely the point where the group is most homogeneous according to our data.

Lehman and Witty (10) have differed sharply with the view that there is an age characterized by gang activities. They based this objection on the results of a play questionnaire filled out by several thousand public-school children. In this quiz the child checked from a long list the activities in which he had actually taken part during the preceding week. These the investigators divided into two sorts; namely, those likely to be carried on in company with others and those likely to be carried on alone. They computed what they called the "index of social participation," which is the ratio of group activities, to the total number of activities. They contended that if there really were a gang age this index should show a sharp rise during that period. As a matter of fact no such sharp rise was found. On the contrary, the index falls slightly and rather uniformly from age eight and one-half to age sixteen and one-half.

This objection need not be taken too seriously, because the tendency to play with others is not necessarily characteristic of the gang age. The highly individualistic play of the eight-year-old needs playmates just as really as the exceedingly coöperative team sports of the gang age. Indeed, even the dramatic play which is most characteristic of the preschool period involves the presence of others. The falling index of social participation probably means nothing but that, with advancing years, the boy is gaining initiative. The young child is more or less helpless when he has no one with whom to play, whereas the older boy can read, or fool with the radio set, or take a ride on his bicycle.

If, instead of using the index of social participation, Lehman and Witty had focused their attention on certain types of activity which are known to be characteristic of the gang age or of the age which precedes it, they would have noticed that some sort of a break does come at this point.

There are at least three easily observable characteristics which sharply distinguish the gang age from the period preceding. These are, an interest in team games, a readiness to join gangs or clubs, and an unwillingness to play with girls. These marks characterize those boys in the ten-year-old group who have actually reached the gang age. Of course, they do not appear in the less mature group of ten-year-olds, in whom the gang impulse has not yet manifested itself.

Boys of almost any age enjoy baseball, football, and basketball, but they do not play these games as team games before a definite period. The latter is characteristic of the gang age.

Case 25. Owen is small for his age but he makes up for that by a superabundant energy. He plays all the team games with remarkable enthusiasm and quite unusual skill. In an intramural baseball league, organized in the school which he attends, the boy captained a team of older players and stood very near the top of the league in batting. In basketball he is equally good. He plays on a team with boys older and larger than himself and does more than hold his own. Although he is not a member of a regularly organized football team, he plays that game very well on "pick-up" teams.

Not only does Owen enjoy the team games himself, but he likes to watch others play them. He attends the baseball, football, and basketball games of a local university whenever he can gain admittance, and a major league baseball game is a special treat. When nothing better offers he likes to watch the games of local high-school and sand-lot teams.

The ability to enjoy the team games implies the ability to coöperate. It implies that the player must be more interested in the success of the team than in his own individual exploits. The athletic field, however, is not the only place in which this newly developed tendency manifests itself. The same impulse

finds expression in the readiness with which the boy attaches himself to social groups. It makes little difference whether the group in question is a regularly organized boys' club, sponsored by adults, or a spontaneously formed gang. The essential thing is that the boy likes to be part of a group. As Lee says, he is a "jiner."

It is for this reason that the gang age is the golden period for membership in boys' clubs. Such organizations as the Boy Scouts, the Wolf Cubs, the Boy Rangers, and the constituent clubs of the Boy's Club Federation draw a very large proportion of their membership from the gang age.

It is, however, in spontaneously organized groups that the gang tendency finds its fullest expression. A number of boys form the habit of associating with each other. They meet day after day and carry on a large part of their activities in common. Such a group is a gang, for this term should not be restricted to highly organized clubs with recognized rules and elected officers. The essential thing is group consciousness. If the boys themselves draw a line of demarcation and recognize certain individuals as "belonging" and other individuals as "not belonging," then the club deserves to be called a gang in our sense of the word.

As may be readily guessed, gangs differ very greatly in degree of their solidarity. Some are rather diffuse groups, scarcely to be recognized as gangs.

Others exhibit such a high degree of cohesion that no one could mistake them. Thrasher (16) has proposed a very suggestive division. He distinguished (a) diffuse, (b) solidified, (c) conventionalized, and (d) criminal gangs. He believes that the natural history of the gang begins with the diffuse type. Gradually this passes into the solidified gang. As the boys get older they may adapt themselves to the forms of civilized society and become a conventionalized gang or adult club, or else they may defy society as a criminal gang.

We speak of the "gang age," but it must not be imagined that the gang phenomenon is confined to this period. On the contrary, it exists to some extent at all later ages. After all, is not a foursome of prominent business men, who meet every Wednesday for an afternoon of golf, a sort of adult gang? We call a certain period in the boy's life the "gang age," because the phenomenon makes its appearance then and because it plays a larger part in the boy's life then than at any later age, and not because gangs exist only at the period in question.

The gang has not been studied so much as it deserves. Sheldon (15) used a very crude technique which is now regarded as inadequate. Puffer (14) confined himself to the study of boys in a parental school, hardly a typical group. Thrasher (16) devoted his attention to delinquent gangs almost exclusively. The average gang of the average boy is

an unexplored territory from the scientific standpoint.

The above studies seem to indicate that gangs are extremely variable in their size and organization. Perhaps the average number of members is about six or eight. There is always a leader—or nearly always—although he may not be explicitly recognized as such. But whether he is recognized or not, there is almost always some dominant personality to whom the members look for suggestions, when time hangs heavy on their hands, and who furnishes the necessary leadership in emergencies.

Sheldon (15), in his pioneer study, divided gangs into several types. He found that an overwhelming majority of boys' groups were either athletic or predatory. That is to say, the activities which appeal to the members of the gang are such as involve physical activity and excitement. This generalization has been borne out by all subsequent studies. The boy of this age thirsts for adventure in any case, but when he is with the other members of his gang this taste is intensified to the *n*'th degree.

Psychology has yet thrown little light on the underlying causes of the gang phenomenon. Various writers have noted the fact that there is a tendency for boys of the same chronological age and mental age to associate with each other, thus verifying the old axiom about birds of a feather. Almack (2), Warner (17) and Williams (18) have noted this

fact. The present writer (6) has confirmed these findings and has discovered, in addition, that pairs of chums tend to be matched even more closely in developmental age than in any of the other variables. Propinquity in neighborhood or school grade seems to be an absolute essential.

Allport (1) reports a number of interesting studies by himself and others, showing the presence of what he calls "social facilitation" in the group. That is to say, there is a general tendency for persons to act more quickly and more efficiently in the presence of others than when they are alone. This is true particularly of activities which do not require the use of the higher thought processes. Allport also calls attention to what he calls "crowd conservatism." It has been demonstrated under experimental conditions that persons tend to be more conservative in their judgments when other persons are present. The inference to be drawn from these investigations is that the boy is more active as a member of the gang than when he is alone, and that he is likely to conform to the standards of the group.

A number of gangs were observed in the course of the present study, of whom the Mohawks may serve as an example. A group of boys in the same room in school, and ranging in age from ten years up, decided to organize a football team of their own. This was the origin of the Mohawks. They held weekly meetings in the houses of the various mem-

bers, organized athletic teams, and collected dues at the rate of five cents a week. They were headed by regularly elected officers.

The activities of the gang were by no means confined to the athletic field. They became a school problem and annoyed their teachers considerably. They threw stones at the caretaker of a local playground. One man in the neighborhood incurred their special enmity, and the gang pelted his daughter with snowballs on her way to school and lured his poodle dog away through the alley gate.

Hallowe'en was a bright spot in the life of the gang. They rang most of the doorbells in the neighborhood and committed other minor depredations. At the end of every year the group appropriated their entire treasury for an orgy of candy and ice cream sodas. After two or three years the members graduated from grammar school and went to different high schools. And the gang was no more.

A third phenomenon which distinguishes the gang age from the age which precedes it is the fact that girls are rigorously excluded from participation in masculine activities. The girl, however, does not feel this affront very keenly, since she is passing through a gang age of her own and has the same negative attitude toward boys that they have toward her. The ultimate insult to the lad at this period is to call him a sissy, and his idea of absolute zero in amusement is to call on a girl.

Thus far in the chapter we have discussed the gang-age boy. But on their tenth birthday most boys have not yet reached the gang age and more than half of our ten-year-old group still showed the individualistic psychology of the younger boy. The cases of Frederick, Conrad, and Harold will illustrate the type of behavior characteristic of the less mature ten-year-old.

Case 26. Frederick is an outstanding little fellow, as neat as a pin. His light brown hair is carefully combed back to form a glossy surface. His clothes show care and taste.

The boy likes baseball but not as a team game. He prefers such individualistic sports as throw the tin can, hit-the-stick, buck-buck, blacksmith, and tag. Now and then he plays tag with girls. Wild-West pictures and comedies are his preferences in the movies and he dislikes "loving" films. He enjoys story books which emphasize adventure and activity.

Case 27. At the age of ten Conrad had an IQ of 81, implying that he is rather retarded mentally. The same retardation is evident in his behavior. He plays baseball, football, and basketball, but not as team sports. Play with girls occupies a considerable part of his time; but with them he is more apt to jump rope than he is to play house. On rainy days toy autos, steam shovels, and electric trains help to occupy his time.

Case 28. Harold is a manly youngster. He does

not give one the impression of effeminacy, which is likely to be observed in the immature lad of ten. This impression is borne out by his enjoyment of the team games. He is probably very near the transition point and yet he has not reached it. This is shown by the fact that individualistic sports loom large in his life and also by the fact that he will play baseball with girls—something which no self-respecting boy of the gang age would consent to do.

The year which follows his tenth birthday is apt to be a transition period in the life of the average boy. For this reason it merits the scientific scrutiny of psychologists and social scientists to a far greater extent than has heretofore been the case. It is necessary at a certain period for the boy to break away from home and take his place in the social group. In the normal child this occurs at the beginning of the gang age. The boy needs our intelligent guidance at this crucial period in order that his gang activities, which teach him the elements of social coöperation, may be an introduction to intelligent citizenship. For the gang is indeed the school of the citizen.

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CHAPTER VII

THE TWELVE-YEAR-OLD

The gang age reaches its fullest flower in the twelve-year-old. Never before has the peculiar psychology of this age been quite so evident and it never will again. A year or two earlier the boy had not quite emerged from the imaginative stage. A year or two later approaching adolescence will have an appreciable effect on his character, but this age of twelve is free from both these influences. The diagram already reproduced on page 93 represents the interests of a group of boys in group activities of a sort characteristic of the gang age. It will be noticed that the curve reaches its maximum almost exactly at the age of twelve.

The boy enters his twelfth year with a good physical equipment. He has already attained over four-fifths of his adult height and little over one-half of his adult weight. According to the United States Public Health Service norms, the boy of this age weighs 78.0 pounds and stands 56.2 inches tall.

Along with this increased bodily size comes an increased freedom from disease. The Hagerstown

Morbidity Studies (5) showed that boys in their twelfth year lost an average of only 5.426 school days per year through sickness. Most of the diseases studied showed constantly slowing rates. Several of them, however, reached a maximum at or about twelve years, as if the gang age were indeed a separate period with its own physiological as well as its own psychological characteristics. The group of complaints referred to include headache and neuralgia, digestive disorders, tonsillitis, and accidents. Perhaps the latter fact reflects the great physical activity of the gang age boy.

At twelve years adolescence is still too far off to make its influence felt very strongly. All available investigations seem to show that puberty is rarely attained by boys of this age. Marro (10) did not find pubescence in any of his subjects at twelve. Crampton's (6) results do not extend back to the twelfth birthday, but he found only six per cent of his cases mature between the ages of twelve and one-half and thirteen. Baldwin (2), using Crampton's norms, found no boys so young as twelve with completed pubertal development among 3,600 high-school athletes and the youngest among 1,317 country boys was eleven and one-half years old. The same investigator, using a laboratory method, discovered only one out of twenty-nine boys between the ages of twelve and thirteen who had become fully adolescent.

In mentality as well as in physique the twelve-year-old boy is fast approaching the adult standard. The results of the army testing (15), taken at their face value, seem to show that the average mental age of the army recruits was just over thirteen years. While many psychologists question this conclusion, it seems safe to state that in the average case pure intelligence is comparatively near the adult level at twelve years.

The fast maturing mind of the boys of this age makes possible considerable educational progress. The average child of twelve should be beginning the seventh grade. In a modern school system this will mean that he is entering junior high school—an institution founded for the precise purpose of caring for the new life which will soon waken within him. Now for the first time the school offers him exploratory courses which will help him choose his life work, while vocational and educational counseling take on a new and more serious aspect.

The first characteristic of the twelve-year-old to strike an adult is his restless activity. His teacher is driven to exasperation in her efforts to keep him reasonably quiet in the classroom, while his mother is on the verge of despair at "the way he runs through his clothes." Whereas a couple of years ago he was satisfied with relatively informal games he now gives his allegiance to the standard team games—football, basketball, baseball, and so forth.

He is willing to travel a considerable distance to reach a satisfactory playfield for these sports.

The necessity or the desirability of finding a suitable place for playing games is not the only thing which takes the twelve-year-old afield. He enjoys traveling for the fun of traveling. If there is no Boy Scout Troop in the neighborhood to organize hikes for him, he plans expeditions of his own, and loves to spend his holidays in the woods and open fields with his cronies. Strange devices for locomotion make their appearance. Bicycles, wagons, scooters, roller skates, trucks constructed of soap boxes and discarded baby-carriage wheels—all minister to his thirst for rapid locomotion.

The variety of play activities characteristic of this age is well illustrated by the cases of Walter and Bobby.

Case 29. Walter won a prize once in a newspaper contest to determine the most freckled boy in the city. With his sandy red hair and his snub nose he looks like the picture of a typical boy from the cover of a magazine. Psychometric tests show that he is unusually bright. He possesses a degree of intelligence which is just short of genius. He is a trifle taller and larger than the average boy of his age, according to the United States Health Service norms.

Walter plays all the team games with enthusiasm. He is captain of a basketball team and he plays football and baseball with the other lads of his block.

An even more vigorous sport is hockey played on roller skates on a side street. Some of the more active informal games—a game known locally as "blacksmith" for example—also share in his interest.

When he cannot play out of doors Walter likes to go to his cousin's house where there is an informal gymnasium in the cellar, including chest weights, punching bags, and other apparatus. Sometimes, again, he stays at home and reads. But here, too, his characteristic love of activity and excitement crops out; for the books he prefers deal with cowboys, football heroes, detectives, and other virile characters. When he goes to the movies the same preference is noticeable and he enjoys pictures which involve athletics, cowboys, and war.

Walter is an enthusiastic Boy Scout, and the Scoutmaster has no difficulty in arousing his enthusiasm. Rather, he finds it a problem to restrain the boy so that his exuberant spirits will not disturb the orderly progress of the meeting.

There is no doubt that Walter belongs to the gang age. His restless activity, his preference for the team games, his irresponsibility and enthusiasm, his interest in Scouting—all place him definitely in this period.

Case 30. Bobby is another very normal boy of twelve. Like Walter he is full of life and plays the team games with a great deal of *élan.* He has been a member of regularly organized teams in basketball,

baseball, and football. Besides these standard games he enjoys less formal active sports, for example, blacksmith, candy buck, red rover, kick the can—such being the local names by which these games are known. His reading reflects the same interests. His favorite topics are athletic sports, Scouting, and war. He enjoys the standard boy's books, especially the "Tom Swift" series. He goes to the movies about once a week, and there Wild-West and war pictures are his favorites. At home he enjoys playing on a small pool table. He also likes to box in the cellar with some of his friends.

Before his twelfth birthday Bobby was, of course, too young to join the Scouts, but his presence was tolerated at the meetings. He intends to become a full-fledged member at once now that he is twelve. He likes "to take Scoutin' trips" (hikes into near-by woods). Sometimes, instead of going to the woods, he and his cronies go down town to visit the museums.

Bobby likes to make things. He made a boat with a friend once and tried it out, but, as he ruefully confessed, "it had a few leaks in it." He made a chair out of kindling wood for his little brother. Data on the durability of the chair are not available. The same interest also finds outlet in his play with an Erector set.

The activities of a twelve-year-old boy may be illustrated by the following account of a typical,

uneventful Saturday in the life of a boy of this age.

Case 31. At quarter to nine Dan opened his eyes, stretched himself, and yawned. He noted with approval the fact that it was a pleasant day and remembered happily that it was Saturday. At ten minutes to nine he got up, washed, and dressed himself leisurely.

It was half past ten before he finished his breakfast. He did an errand for his mother and then went over to the house of his friend Skinny, who lived in the same block. The pair played ball a while, then they went into the house and worked on a radio set.

It was half past two before the pangs of hunger began to assert themselves and Dan went home to dinner. Afterwards, he went out again, played ball some more, and went to Skinny's house to see how the radio was getting along. Then he dropped into his own house and reappeared on the street with a piece of pie in his hand. He played catch some more until supper time, then went home, did an errand, and sat around reading a book until eight-thirty, at which time he went to bed.

The preceding case summaries will illustrate the fact that the normal twelve-year-old leads a fairly active life. In the groups studied the standard team games seemed to be the most popular of all sports. This is not surprising in view of the fact that the

gang spirit runs high at this age; for the team game capitalizes the gang spirit to a high degree. Baseball, football, and basketball, therefore, were played frequently and with enthusiasm. When adequate facilities were not available or when too few players were present, these games were played in modified forms—"touch" football, for instance. Such games as soccer, tennis, volley ball, wrestling, golf, and horseshoes, played the part of minor sports among the boys of this age. The games of low organization, such as were mentioned in Bobby's case, were also almost universally popular.

Although the twelve-year-old is, as has been seen, a very active individual, it would be a superficial view, indeed, to imagine that these boys have no other interests. Periods of activity alternate with periods of rest, and the successful club leader knows that this alternation of the two types of activities is one of the secrets of success in work among gang-age boys. Active games are more apt to catch the attention of the adult observer, but if it were possible to take a minute-by-minute census of the twelve-year-old's day it would probably be found that quiet periods loom very large. During some of these times the boy is simply standing around idle with the rest of his group; but a large part of this inactive time is devoted to passive recreation.

The normal child by the age of twelve has mastered the technique of reading well enough to read

with pleasure and without too much consciousness of the mechanics of the process. The most popular of all the activities of the twelve-year-old boys, according to Lehman and Witty's (9) questionnaire, was "looking at the Sunday funny papers." This was followed by "reading the newspapers," while "reading books" stood fourth on the list. The books which are read at this period are likely to involve a great deal of action and adventure. The Winnetka list (14) shows that the *Adventures of Tom Sawyer* is by far the most popular book at age twelve, followed by such books as *Huckleberry Finn, Treasure Island* and the *Story of a Bad Boy*. The twelve-year-old seeks the same type of plot when he goes to the movies. Excitement and physical activity are the big attractions.

At twelve years the boy has largely outgrown his love of toys. There are two kinds of playthings, however, which cropped up again and again in the present study. One was the electric train. Few twelve-year-olds could resist its fascination and very many of them owned such toys themselves. The other popular plaything was the "scientific toy" including construction sets like Meccano and Erector, chemistry sets, and similar things. The impulse to construct seems to be active in this age and the chief attraction in all these things is the variety of possibilities which they offer for doing things one's self. It is interesting to note that Meister (11) found

these toys extremely valuable for their educational effect.

Table games had a continued, though minor, popularity at this age. Checkers, cards, and various commercial table games—and now and then chess and dominoes—appear among the activities popular at twelve years. The following two cases will serve as illustrations.

Case 32. Francis was a thoroughly normal boy in the sixth grade at the time of his twelfth birthday. Intelligence tests show that he is a trifle above the average in mental ability, while physical measurements would place him almost exactly at the normal level for his age. A physical examination was entirely negative and nothing in his disease history is significant.

Francis strikes one as a rather quiet boy, somewhat diffident in meeting strangers, but popular among his fellows and not in the least effeminate. He enjoys the team games but does not swim.

Passive recreation looms large in Francis' life. He has some tools and likes to make simple objects with wood. An electric train occupies his time occasionally. The lad is a voracious reader and enjoys all the usual boys' books. There are no juvenile periodicals at his home. He goes to the movies once a week or so and frequently attends professional or college football games.

He has an income of thirty cents a week from de-

livering a well-known weekly magazine. His mother and aunt give him a little more in addition and he has the privilege of collecting the old newspapers of the family and selling them to the junk man. His parents encourage systematic thrift, but he has enough money left for the movies and candy.

The account of a typical holiday just after his twelfth birthday may illustrate a sort of activity which Francis enjoys. He got up at eight o'clock and had his breakfast at leisure. At nine he did half a hour's work helping the members of his Scout Troop decorate a hall. From nine-thirty to eleven he hung around in the school yard with his friends. Then he went to see a football game, returned home at half past one and had his dinner at two. At three o'clock he and some other boys built a little bonfire near the school. At five he came home and had his supper. Then he, with his mother, aunt, and two brothers, played "Old Maid" and other table games until bed time, which was nine o'clock.

Case 33. Leo is a large boy for his age, but he is distinctly diffident. He does not mingle with perfect ease with the other boys of his group. He seems bashful and self-conscious. He is distinctly less interested in the team games than is the average boy of twelve, although he plays all these games occasionally.

Leo shows an unexpected interest in quiet games. He plays checkers with his younger brother, enjoys

a "ten pin" game and a game called "Spark Plug." He has no scientific toys. He reads a great deal. He likes books about school life and about sport and enjoys the works of Zane Grey. He goes to the movies very often, perhaps three times a week. His preferences are the usual preferences of twelve-year-old boys.

With most lads of this age passive recreation does not loom quite so large as it does with Francis and Leo. Yet it plays its rôle even in the life of the most active boy. It is a feature which must be taken into consideration by anyone planning a recreational program which hopes to get and hold the interest of the gang-age boy.

To the casual observer the twelve-year-old is a happy, carefree animal, with no thought of the morrow. A closer study of his personality, however, reveals unsuspected depths of feeling and emotion. Twelve-year-olds differ among themselves just as widely as do adults. There are boys of this age who make friends readily and become popular wherever they go. There are others who are shy and diffident and find it hard to approach strangers. Some are generous, some are selfish, some are stolid, some are emotional. In a word, all the varied types of adult character may be found, at least in germ, in the child.

Although personality problems are probably as widely distributed in the child as in the adult there is one hopeful difference in favor of the former. This

is the fact that in the child, personality traits have not become ingrained through years of exercise, and therefore, they are much more amenable to modification. From this hopeful fact flows the great importance of understanding the psychology of childhood. For social control must rest on insight.

The group of twelve-year-olds included in the present study exhibited all varieties of personality from the very well balanced type to the feeble-minded and very poorly adjusted individual. It is difficult to express these things quantitatively and one must be quite arbitrary in drawing the line between good and poor adjustment. In the present writer's opinion, however, about thirty-nine per cent of the group deserve to be called perfectly adjusted. That is to say, they show no readily noticeable difficulties in their adjustment at home, at school, or with their fellows, and they give promise of growing up to be thoroughly normal and socially minded men.

As it is difficult to draw the line between good and poor adjustment so, too, it is difficult to classify the different sorts of personality difficulties. Human nature is so complex that it is hopeless to look for any thoroughly satisfactory classification. Here, again, therefore, it is necessary to be quite arbitrary. We are frankly so in dividing the poorly adjusted persons of this group into four divisions. First come the non-social group, making up about twenty-one

per cent of the cases. Here belong a number of boys who—perhaps for very diverse reasons—had difficulty in making social contacts. All of them were in some degree shy, diffident, or introverted. Closely related was the group of effeminate boys. This difficulty appeared in about seventeen per cent of the cases. These lads lacked the self-assertion necessary to become normal members of the group. Sometimes they showed a too great dependence on their parents. Sometimes they avoided rough games. All of them seemed to be lacking in the vigorous masculinity of the twelve-year-old. None of the boys in the present group was technically a delinquent. A few of them, however, belonged to gangs with a more or less shady reputation and these interests marked them off somewhat from the balance of their fellows. A group of predelinquents, therefore, may be distinguished, making up fourteen per cent of the total number. Finally, eleven per cent of the boys presented undesirable behavior characteristics which do not fall into any of the previous classes.

Case 34. David represents one type of the repressed group. He was a very healthy youngster, large for his age and well above the average in intelligence. He came from a good home and had four siblings. He was always very diffident in meeting strangers. School presented great difficulties for him. A first-grade teacher testifies that he would absolutely refuse to recite in class, except when every

one in his row was called on. The result was that in spite of his very unusual ability he failed to be promoted at the end of his first year. He was very sensitive to criticism on the part of his teachers. Once, his mother states, his teacher reproved him sharply, and, as it happened, unjustly. David could not be induced to explain the matter to her but went home and cried. He was at ease among his young companions but adults found him very hard to approach. It was very difficult to gain his confidence. Whatever the cause of David's shyness he soon outgrew it. At sixteen he could make social contacts quite readily without a trace of his old bashfulness.

David's difficulties were principally in regard to adults. Among children of his own age he was almost as much at ease as the average, but there are other boys who are largely cut off from intercourse with their own group.

Case 35. Leonard is an example of the latter type. Although somewhat below the average in size, he is distinctly superior in intelligence with an IQ on the Stanford Revision of 119. A very large proportion of his spare time is given to quiet pursuits. He is an insatiable reader. He enjoys the usual boys' books but in addition he reads a great deal of other fiction, which the average boy of his age would find uninteresting. He enjoys such periodicals as *Collier's, Liberty,* and the *Literary Digest.* Constructive activities also play a large part in Leon-

ard's recreation. He has an Erector set and enjoys playing with electric trains. He likes "to fool with tools."

Leonard's active recreation is largely limited to the company of one boy. This other lad, Lawrence, is a year younger than Leonard and like him, he is not thoroughly at ease in the company of other boys. The two of them seem to find in each other's company social satisfaction which the normal boy of the gang age would find in the much larger group. The two of them skate, play with electric trains, and engage in similar activities together. Neither boy has shown more than a very passing interest in a Scout Troop or a boys' club, which was organized in their neighborhood.

The effeminate boy is a type closely allied to the non-social. Both of them have difficulty in adjusting themselves to the group in which they move. But whereas the boy who is merely non-social may show only a distaste for group activities, the effeminate boy may show antagonism and will probably arouse antagonism in the group.

Case 36. Eustace has never been popular with the other boys. He was more or less pampered at home but when he tried his selfish policies in school he found, to his sorrow, that they would not succeed. A definite antagonism arose between him and the other boys. He played with girls and had no little difficulty in making adjustments. He was

teased considerably and was unwillingly the central figure of certain escapades. For example, during one recess a group of the other boys ambushed him, transported him to the cellar of a vacant house, and removed from Eustace a certain essential part of his clothing, leaving him in an embarrassing situation.

There was some basis for the supposition that Eustace's effeminacy had a physical basis. His high pitched voice, the contour of his lips, and certain other characteristics might lead one to suspect glandular imbalance.

Case 37. Carl will serve as an example of the mildly predelinquent boy. He is in most respects a typical twelve-year-old. He plays the team games and other informal games which are popular at his age. He has an electric train and construction set; he rides a bicycle and enjoys roller skates. He is frequently at the movies, but objects that "there are too many love shows." For reading he prefers Wild-West books and fiction of that type. One distinguishing characteristic about Carl is that he is the youngest member of a gang of boys much older than himself. None of these lads has a court record but their reputation is poor. They annoy passing girls with remarks, they make themselves troublesome to the neighbors, and they are constantly being threatened by policemen for minor disorders. They smoke and play poker in vacant garages and boast of their intimacy with the local bootleggers.

Carl's membership in this particular gang seems to be more or less accidental. He lives in the neighborhood which the other boys haunt and there was no other attraction strong enough to satisfy his intense love for physical activity and excitement. A good recreational program is the best answer to the problems presented by gangs of this sort, which are not highly anti-social.

None of the preceding cases was very serious. They were all merely minor maladjustments of personality and all of them in their present stage offer the greatest hope for successful treatment. In the normal course of events probably none of these boys will prove delinquent enough to receive prolonged treatment from the juvenile court. None of them will be queer enough to be brought to a mental clinic. All of them, however, present difficulties of personality which are serious enough to cause much mental suffering in later life if they do not receive prompt treatment at an early age. Where parents fail to cope with such difficulties the school or the recreational leader must take up the responsibility. A coördination of school and play life offers the best hope for the routine treatment of these minor difficulties of personality in the future.

In Chapter II an effort was made to emphasize the fact that developmental age is only roughly correlated with chronological age. When we speak of the typical twelve-year-old boy we are speaking of an

average. The individual lad within this group may differ from this average very strikingly. In the twelve-year group are boys whose play activities and type of personality are similar to those of the average lad of ten. On the other hand there are precocious lads whose reactions are a foreshadowing of adolescence.

Case 38. Max was a quiet and rather repressed little boy who astonished his classmates by falling violently in love at the age of eleven and one-half. Only a Tarkington could do justice to the ardor of his infatuation. His school teacher was in despair. She found it almost impossible to secure Max's attention so long as the object of his devotion was in the same classroom. No amount of ridicule or abuse on her part would seem to have any effect. Although Max lived near the school he insisted on bringing his lunch every day so that he might accompany Marjorie to her home and wait for her beneath her window. After school he would make a pilgrimage to her neighborhood and stay there until bed time, merely taking enough time off to eat his supper. If Marjorie would come out and play with him he was in the seventh heaven of bliss; if she did not, he was content to stay outside of her window, happy in the consciousness that she was not far away.

Although love affairs are common enough among twelve-year-olds in fiction, a case like Max's is very rare in real life. This devotion to a girl is uncom-

mon before adolescence and is a distinctly precocious trait. On the other hand, cases occur in which this type of personality seems to be an echo from earlier childhood. Bernard, for instance, is as retarded in his personality development as Max is accelerated.

Case 39. Bernard is a bright, attractive, little boy of about the normal physical and mental development for his age. A physical examination shows no outstanding defects.

Bernard's "cute" remarks have been more or less praised at home, so that no one suspects that the lad adopts a "cute" pose more or less intentionally. He cries easily, and when, seven months before his twelfth birthday, he went away from home for the first time to spend a week with some friends at the beach, he devoted a large proportion of his time to crying. At the age of twelve Bernard still jumps rope occasionally with the little girls on his block and, although he is a member in good standing of a gang of boys, they are distinctly conscious of Bernard's immaturity.

Case 40. Alexander appears to be even less mature than Bernard. He seldom plays with boys of his own age and whenever he indulges in baseball it is on a tiny vacant lot with the girls and younger boys who live near his home. He still enjoys dramatic play and takes part in the recreation of the little girls of his block. Among boys he is repressed and diffident.

It will be noted that both Max and Alexander enjoyed the company of girls, but a closer examination reveals a vast difference in their relation to the other sex. Alexander played with girls because he was not mature enough to take a healthy interest in the active pursuits of the boys of his age. Max, on the other hand, has already passed through the gang age and was taking a distinctly adolescent love interest in the fairer sex. In spite of a superficial resemblance, the phenomena are poles apart.

The personality of the twelve-year-old is quite distinctive and characteristic. We cannot treat him as a young child nor as an adolescent. His is a transitional period whose problems can be met only by recognizing their distinctive characteristics and by meeting them as such.

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CHAPTER VIII

ADOLESCENCE

ADOLESCENCE is the period during which the growing boy ceases to be a child and becomes an adult. It finds him interested in electric trains and leaves him interested in tea dances. Before this tremendous change the boy is probably anxious to be Babe Ruth, after it he wants to be John Gilbert or Judge Gary.

Adolescence is, therefore, a period of change and readjustment. Unfortunately, the former is likely to take place much more swiftly than the latter. The changes involved leave the boy bewildered. Before the necessary readjustments have been accomplished he has to pass through a period of storm and stress. The new life which is stirring within fills the growing boy with compelling desires before he has properly developed the corresponding inhibitions. He demands the privileges of adulthood, but he does not yet realize its responsibilities.

Evidently adolescence is one of the strategic points in the life of the individual. It is the period when the boy's character very frequently takes its final form, whether he is to become a judge or a hijacker, a dean or a day laborer. Delinquency statistics prove

that most criminal careers can be traced back to adolescence, and the well-known studies of Starbuck (20) show that when deeply religious people are able to date the inception of their devout lives to a particularly spiritual crisis that crisis is apt to occur during the same period. The adult saint or sinner is likely to be such because he was a saintly or a sinful adolescent. Evidently the period deserves careful study. It is important not only to the theoretical psychologist who would understand human nature, but also to the practical social worker who would control it.

A great deal has been written about adolescence. Some writers such as Tracy (22) or Kirkpatrick (14) have written largely from the theoretical standpoint and have based their conclusions on a few general observations. Such studies are open to the same objections as all other purely theoretical works. They are useful because they help to focus interest on the problem, but they do not measure up to the standards of modern science.

Other investigators have used the more scientific method of basing their theories on source material. Writers of this sort have sought their data in the biographies of famous men and women, in accounts of the adolescent in literature, in the study of diaries kept by adolescents, or in the reminiscences of adults written at the request of the investigator. The first writer to employ this latter method on a large scale

was G. Stanley Hall (11, 12). His massive volume *Adolescence* is a classic. Therein he succeeded in synthesizing practically all the studies which had appeared up to the end of the nineteenth century. This method has been followed by many others. For example, Bühler (3) has made interesting studies of adolescents' diaries, and Mudge (18) has collected accounts written by adults of their youth.

The method of Hall marked a great advance in the history of adolescent psychology, but it has certain obvious disadvantages. The study of biographies is the study merely of outstanding men and women. It throws little light on the psychology of the average adolescent. It is likewise probably true that the type of young person who writes a diary is a type more intelligent and more sensitive than the average boy or girl. Therefore, studies based on diaries are apt to be concerned with a rather selected type of personality. Furthermore, there are certain obvious systematic errors in this technique. The adolescent does not understand himself. His diary, even if he is perfectly frank, is only an account of what he thinks of himself, not of what he really is. The questionnaire responses of adults are almost sure to be distorted by the years which have passed between. Finally, the biographies of eminent men are apt to run a bit thin in the chapters which treat of the subject before he attained eminence.

It is highly desirable that adolescence be studied

by thoroughly modern scientific methods. Richmond (19), Brooks (2), and Hollingworth (13) have written books about the problem from the standpoint of modern psychology and have introduced a few case studies in accordance with up-to-date clinical methods. Most of these cases, however, were rather abnormal. Much more satisfactory is Bühler's (4) excellent study of fifty girls in a shelter in Vienna. The results are somewhat vitiated, however, by the fact that the subjects were a highly selected group living under somewhat abnormal circumstances. The present study is an attempt to apply the case technique to a fairly unselected group of boys. In the records of the present writer there were twenty cases for which the records were complete for at least two or three years, covering the period of adolescent change. In sixteen, or eighty per cent of these cases, there was a definite and relatively abrupt change in personality. The present chapter is to be based principally upon an intensive study of these sixteen boys.

One of the most noticeable signs of dawning adolescence is a sudden change of companionship. This was noted in fifteen out of the sixteen cases and it was probably true of the sixteenth case as well. The first indication which the adolescent receives of the change which is taking place within him is the fact that he suddenly finds the company of older boys more satisfying than that of the younger boys with

whom he used to associate. A very interesting phenomenon in this connection is the uniformity with which the adolescent leaves the Boy Scouts in case he has happened to be a member of that organization. Sometimes the change will show itself in a gradual drifting from one to another of the neighborhood boys' groups. The writer recalls the case of Joseph and Lawrence, who were inseparable companions from the time they entered school. Suddenly one summer the friendship dissolved for no apparent reason. Lawrence began to go around with a group of older boys, while Joseph still was loyal to his former group. After three or four months had passed Joseph, too, abandoned the group of younger boys and he and Lawrence became close friends as before, within the circle of adolescents in which they both moved. The explanation of this phenomenon, of course, was that first Lawrence and then Joseph had become adolescent.

Case 41. The suddenness of the adolescent change is well illustrated by the case of Eugene. At the age of fifteen years and one month he was an enthusiastic member of a local Boy Scout Troop. He was very proud of his Scout uniform. Having long since attained the rank of Second-Class Scout he was working hard to become First Class. The incipient change first showed itself by some minor disorders at a Scout meeting. Evidently Eugene was beginning to lose interest. Soon after he began to object to wearing

the Scout uniform. He felt that it made him look conspicuous. However, at the age of fifteen years and three months the boy was still interested enough in Scouting to take the trouble to pass his map test; but he was beginning to spend more and more time with a group of older boys in the high school which he attended and with another group of older boys who lived on his block. He liked to talk about these new friends and their exploits, and took a rather patronizing attitude toward his fellow Scouts.

A month later, at the age of fifteen years and four months, he finally became a First-Class Scout, but after another week he was very disrespectful toward his Scoutmaster at a Patrol meeting. The next day he apologized and went on a hike. He now began to spend more and more time with the other boys on his block. One of them bought a very old Ford and the group began the task of overhauling it. For the next month Eugene hesitated between the two groups. He divided his spare time between working for Merit Badges with the Scouts and working with his new friends on their Ford. He began to grow cold toward Francis, his former bosom friend and spoke of the latter as being somewhat too childish for his attention. In another month the change had become complete. Eugene had definitely severed his connection with the Scouts and had thrown in his lot with the boys on his block. He was very much interested in the process of remaking the Ford and

spoke about taking up automobile repairing as a vocation—something which he later actually did.

Case 42. Thomas was a boy whose physical development was very rapid. All during his boyhood he would have been able to pass as two or three years older than he actually was. Mentally he was slightly below the average intelligence for his age, but his personality showed the same rapid development as did his physique. At the age of twelve Thomas was in the fifth grade of a grammar school. He was a quiet, rather repressed boy, very good-natured and apt to be imposed upon somewhat by his companions. He could always be depended on to run errands for his older brothers, and he seemed quite content to play a subordinate part in the games of his group. During the next summer (Thomas' age being about twelve years and three months) a startling and rather sudden change in his personality took place. He began to assert himself. He left his former chums and associated with a gang of relatively tough characters on X Street. Among them his manner changed. He became a person of importance and was as ready as anyone else for adventure. Although he never bullied, it was evident that he looked with a certain contempt on his former friends.

Adolescence almost inevitably brings a change in preferred play activities. One hundred per cent of the present group showed such a change. They

abandoned the less mature amusements, such as informal team games, Scouting, and similar activities. They played the team games; but they played them on closely organized teams with a coach, uniforms, and regular schedules. They were apt to enjoy the company of girls, and such events as dances and parties were attractions. The case of Wilfrid will illustrate some of these differences.

Case 43. At the age of fourteen Wilfrid was a very quiet, somewhat timid boy. He enjoyed the usual team games, playing baseball and football, for the most part informally, in the school yard, and basketball in a local gymnasium. He showed no great proficiency in any of these sports. Often he would play catch or kick a football on the street in front of his house. Sometimes his sister, who was more or less a tomboy, would join in the sport. Wilfrid was somewhat sensitive. His feelings were easily hurt and he would cry when the other boys teased him. His teacher found him very tractable in school.

During the following summer when Wilfrid was aged about fourteen years and nine months, significant changes began to occur. He no longer enjoyed very informal games nor played catch in the street. All his interest was now absorbed in a very well organized and uniformed baseball team. He gave his whole allegiance to the group of older boys who made up this team. He was as thoroughly a part of their group off the diamond as on it. He

began to smoke and play poker, and something of bravado crept into his manner. He bullied younger boys. His new friends and their exploits absorbed all his interest.

Many of the new pursuits of the adolescent are likely to be somewhat undesirable from the adult's point of view. The adolescent must express his newfound individuality and he may do so by smoking, gambling, breaking windows, or by being disrespectful to his teacher in school. The boy's mother is likely to be very much disturbed at these new problems. She grows pessimistic about the younger generation and fears for her boy's future. It is fortunate that in the majority of cases these fears are unfounded. The adolescent gradually adjusts himself to adult life and only in exceptional cases do the minor delinquencies of this period develop into a definitely antisocial career. Of the boys in the present group sixty per cent showed markedly undesirable conduct and yet probably every one of them will grow up to be a normally wholesome citizen.

Case 44. An example of the turbulance of the adolescent is furnished by Dominic. At the age of thirteen this boy was a typical preadolescent, enjoying the usual active sports—baseball, football, basketball—and thrilling books and movies. He was an enthusiastic Scout and in his neighborhood he was something of a leader. At about the age of fourteen a rather quick change took place. From

being a leader in harmless play he became a leader in minor delinquencies. His teacher found the boy a constant center of disturbance in the classroom. With a group of lads who lived in his neighborhood he organized an informal poker club which met at the members' houses whenever the absence of parents afforded the opportunity. His gang ranged around through the neighborhood, committing minor depredations. Although he was an officer in a local boys' club he was difficult to control. As soon as the adult leader's back was turned Dominic and his gang would begin a typical "rough house." Broken windows and black eyes would be the usual result. He had finally to be expelled from the club.

At fourteen Dominic was a problem at home, in his neighborhood, at school, and in his club. Many a person might have predicted for him an antisocial career, yet two years later he was a thoroughly satisfactory high-school student, well liked by his teacher, popular with his fellows, and taking an active minor part in school sports. There was nothing about the boy at the age of sixteen to justify the dire predictions which might have been made about him two years earlier.

Naturally the minor delinquencies of the adolescent bring him into conflict with constituted authority, and indeed a suspicious and consciously independent attitude toward his elders is one of the distinguishing attributes of the boy of this age. The

younger lad is apt to be uncritical of authority. He will obey anyone who speaks to him in an authoritative tone. The adult, too, has learned to obey and to play his part in an ordered universe. But the adolescent is apt to resent commands. Like a person with an inferiority complex, he is not yet sure enough of himself to submit gracefully.

Case 45. At the age of fourteen years and six months Anthony was a quiet, well-behaved boy, well liked by his teacher and his club leaders and very obedient at home. One year later a tremendous change had taken place. He was very resentful toward his school teachers and seemed to exercise considerable ingenuity in torturing them. His club leaders had found him difficult to manage, and Anthony finally left the Scouts rather than submit to discipline. At home, too, he was a problem. His mother wanted the boy to stay in school while he wished to leave and go to work. In the struggle of wills which ensued Anthony finally won out and left school, to his mother's great regret.

The adolescent in literature almost always falls in love. In real life this does not happen with the same regularity as in novels. However, forty-four per cent of our group had celebrated their adolescence with a love affair.

Case 46. Cecil was about thirteen years and six months when he became interested in the girl next door. The affair waned somewhat with the passing

of the summer, but in the autumn he met Irene and his reaction could only be described as sensational. His whole life was absorbed in the girl and everything else was of secondary importance. He abandoned all his old friends and spent his time with a new group, whose chief interests were centered on the fair sex.

In all the cases reviewed a definite and rather abrupt change was discernible. Sometimes it took place within a few weeks and with such suddenness as to leave the boy, his parents, and friends completely bewildered. The adolescent change, however, does not always occur with such startling swiftness. There are boys in whose cases it is hard to assign any definite date to the transition. It takes place, however, and sooner or later the characteristic signs mentioned above make their appearance.

Case 47. At the age of thirteen Vincent was in the eighth grade of grammar school. He was a strange boy in many ways and made poor social adjustments. His conduct toward his companions was disagreeable. He liked to plague and tease them. These tactics did not increase his popularity. He talked loftily about becoming a missionary and made no secret of these ambitions. His conduct, however, did not mirror the same desire for self-sacrifice.

At fourteen Vincent was in the first year of high school. He did not exhibit any very great change. Perhaps he teased his companions less and had a bit

more poise. A year later, at the age of fifteen, he had begun to enjoy the companionship of girls, and he had become better adjusted toward his companions and less unpopular. He was still nervous and unstable.

Vincent is now sixteen. Looking back on the history of the past three or four years, it is difficult to see any period of sudden change. No crisis is discernible, as was the case with so many other boys. However, a very marked change has gradually occurred. It is only necessary to mention the transition from relatively simple and informal games played with the other youngsters on the street to a type of social activity involving girls, and one realizes that Vincent, too, is adolescent.

What brings about this adolescent change in personality? This is a question of great theoretical as well as practical importance and two answers to it are possible. The underlying causes might be either physiological or social. There are marked bodily changes at adolescence, both quantitative and qualitative. Are these what underlie the changed personality or is the latter caused by the attitude which society takes toward the growing boy? Does the lad abandon childish games and fall in love from some inner compulsion or because he realizes that society expects him to do so?

In this connection it is a significant fact that the average age for the adolescent change in personality coincides at least roughly with puberty. Whether it

coincides exactly or not is a question which has never been determined scientifically.

Many difficulties block the way of such a determination. For one thing it is very difficult to determine just when puberty occurs. The only absolute sign is, of course, the appearance of spermatozoa, but this is obviously something difficult to test. As far as the present writer knows, Baldwin (1) was the only investigator to attempt to determine the age of puberty by a laboratory method. He made microscopic examinations of the urine of a group of 123 boys between the ages of nine and seventeen. The results are rendered unreliable by the fact that he had very few cases in the upper ages. He obtained some positive and some negative results at each age from eleven to seventeen, inclusive. At the age of fifteen, about one-half of the cases gave positive results.

The usual method of investigating this question is Crampton's (5) technique. This investigator distinguishes three stages of maturity, defining them as follows, "A pubescent is an individual who is undergoing this process (puberty) and is in the period of pubescence. The period of pre-pubescence begins at birth and ends at the beginning of pubescence and all in this period are pre-pubescents. All those who have completed their pubescence are post-pubescents. The transition from the pre-pubescent stage to the pubescent stage is gradual. It is begun by an evident and rapid growth of fine hair apparently

already present. This is readily distinguishable, and this characteristic marks the first part of the period of pubescence; the second period of pubescence commences with the pigmentation of the exaggerated growth and pubescence arbitrarily ends with the kink or twist, which is definitely characteristic" (5, p. 143).

At least four investigators have used this general method with results as reported in the accompanying Table I. In this connection it is interesting to

TABLE I[1]

AGES OF PUBERTY ACCORDING TO VARIOUS INVESTIGATORS

Investigator	*Date*	*No.*	*Group Studied*	*Av. Age of Puberty*
Baldwin..	1916	1317	Country boys from Maryland.	14.00
Crampton.	1908	4800	New York high-school boys...	14.39
Marro....	1900	180	Italian boys.....	15.19
Baldwin..	1916	3600	Baltimore school athletes.....	15.25
Godin....	1903	....	French boys.....	15.50

Average age 14.87.

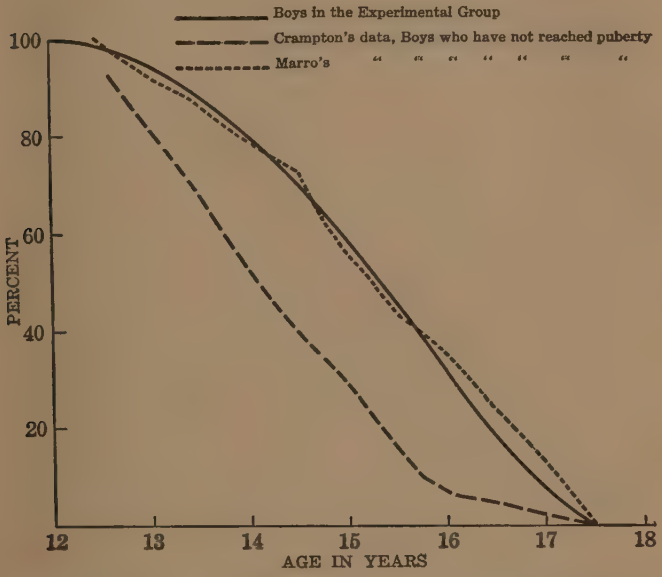
N. B.—"Average age of puberty" in the above table means the age when 50% of the boys have become post-pubescent. In some cases the required age is stated by the author explicitly; in other cases it is obtained by interpolation in his published tables.

[1] Reproduced from the author's *Gang Age*. See reference (7).

note that there is a fair correspondence between the age of puberty as reported by the three of these investigations which dealt with American boys—14.00, 14.39, and 15.25—and the age of the adolescent personality change in the group herewith reported by

the present writer; namely, fourteen years and one month.

An interesting confirmation of this view is furnished by the accompanying diagram (7, p. 13). It will be seen that the curve representing the loss of



interest of boys in Scouting is fairly parallel to the curve representing the attainment of full puberty. Lehman (15), apparently working quite independently, found that a similar phenomenon held good in the case of girls and doll play. Finally the present writer (8) applied the same method to a

number of activities with results which are herewith reported in Table II. It will be seen that there is a general correspondence between pubescence and the

TABLE II

NUMBER OF BOYS CHECKING CERTAIN ACTIVITIES AT SPECIFIED AGES, EXPRESSED AS A PERCENTAGE OF THE NUMBER CHECKING AT AGE TWELVE, COMPARED WITH THE PROPORTION OF BOYS NOT POST-PUBESCENT (CRAMPTON)

	12	13	14	15	16
Play Marbles	100	91	59	36	19
Play "Cops and Thieves"	100	108	61	22	15
Play with Electric Trains	100	77	53	23	6
Play "Run, Sheep, Run"	100	113	74	38	6
Spin Tops	100	72	37	23	14
Play Tag	100	87	57	52	18
Fly Kites	100	83	43	27	14
Play "Follow the Leader"	100	91	54	44	15
Play with Meccano	100	100	63	40	19
Walk with Stilts	100	80	62	47	17
Play with Bow and Arrow	100	84	49	31	13
Boys not Post-pubescent (Crampton)	96	76	47	22	6

abandonment of certain childish activities. These results seem to show that the average age of the adolescent change in personality corresponds to the average age of puberty. This, however, is not a final

proof. It would be necessary to show that the correlation held true in each individual case. So far as the present writer knows there has never been an attempt to correlate the change of personality with the physical phenomenon of puberty, according to Crampton's norms. But it is significant that in a small group of ten cases, for which the writer was able to secure the necessary data, nine out of the ten boys were pubescent or postpubescent before the adolescent change in personality, while the tenth case is recorded as doubtful.

Besides the study of normal cases there are two types of abnormal development which should throw light on the relation between personality and adolescent physical development. The first is the type of case in which normal physical development does not take place at adolescence, either as a result of disease or from a surgical operation. The medical literature contains very full descriptions of the physical phenomena of castrates. But unfortunately very little attention has been given to the study of the psychological characteristics of such cases. The few reliable accounts which we have, however, seem to show that if castration is performed at an early age the eunuch never shows the personality changes characteristic of the adolescent. It may, of course, be objected that this is due not to physiological reasons but to the attitude of society toward such individuals. This objection might have weight in human cases,

but it would not explain the known fact that castrated animals show the same lack of the characteristic male courage, animation, and passion which are so conspicuously absent in the human eunuch (6, 17).

The other type of abnormal development which might throw light on the question is found in individuals suffering from what is called *puberty præcox* or premature development of the gonads. While the literature contains a wealth of detail concerning the physical phenomena accompanying such disturbances there is very little written about the corresponding effects on personality. It seems to be fairly clear that this accelerated development does not bring about a corresponding increase in intelligence (21). Whether or not it does bring about personality changes is still an open question. Gesell (9) is perhaps the only investigator who has studied this question scientifically. He reports two cases in one of which there apparently was, and in one of which there apparently was not, a corresponding maturity of personality.

The cause of the adolescent change in personality is thus seen to be still an open question. We are not yet in a position to decide whether it is due to physiological or social reasons. It is safe to say, however, that the weight of the evidence points strongly in the direction of the former alternative, for there seems to be a general correlation between physiologi-

cal phenomena and personality changes which cannot easily be explained away. It is now known that the so-called secondary sexual characteristics of adolescence—change of voice, appearance of axillary, pubic, and labial hair, and changes in the proportions of the body are due to the presence of a certain autacoid substance in the blood stream. It seems fairly certain, also, that in the case of boys this substance is secreted by the interstitial cells of the gonads. It would seem to be reasonable to suppose that the same hormone which is responsible for the secondary sex characteristics is also responsible for the personality changes of adolescence. It can be experimentally proved that other autacoids produce both physical and personality changes.

Although physical causes are probably fundamentally responsible for the adolescent change, social factors cannot be neglected. If these social factors are not actually causes they are, at least, conditions. Physical reasons may underlie the love impulse, but social factors play their part, too, for it is difficult to fall in love without first having the girl. Physical causes probably underlie the adolescent's impulses, but social conditions determine how they shall be carried out. The same desire for self-expression, which makes hunting attractive to the Indian youth, may urge the city boy to raid the corner fruit stand. The impulses themselves are probably deeply imbedded in human nature, but social factors

provide the opportunity for carrying them into action.

It is sometimes suggested that change of school may be responsible for the adolescent change of personality. In the group studied by the present writer it was hard to substantiate this. In only about six per cent of the cases did the adolescent change coincide even roughly with graduation from grammar school and entrance into high school. Change of school is probably only a minor social factor.

In Chapter VI reference was made to the theory of Hall and others that age twelve is a nodal point in the average boy's life, and that it marks the beginning of adolescence. In spite of the distinguished authority which supports this view, the present writer has been unable to find a single scrap of evidence to substantiate it. The abrupt adolescent change noted in the present group took place at all ages from twelve years and five months to fourteen years and nine months. The nodal age for such a change was between fourteen and fourteen years and six months. The average boy of twelve seems to be in the midst of a distinct psychological epoch, characterized by an independence toward the opposite sex, by a devotion to the team games, and by a desire to adhere to clubs like the Boy Scouts. The present writer has never found that the age of twelve years is characterized by any sharp change of personality, nor has he found in the literature of child psychology any

justification of the view that such a change takes place.

It may be seen from this brief review that the psychology of normal adolescence is very little understood. In view of the tremendous importance of the subject this is very unfortunate. It is to be hoped that future investigators will attack this problem, the study of which should throw much light on the nature of human personality and should aid society to assure its members a more normal and healthy development.

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CHAPTER IX

THE FOURTEEN-YEAR-OLD

In many ways the fourteenth year is likely to be a critical one in a boy's life. It may mark the transition from school to work or from grammar school to a high school, in which he may pursue his studies with a definite vocation in mind. It may mark the beginning of the stormy period of adolescence. Many a boy enters his fourteenth year a child and leaves it practically an adult.

At fourteen the boy has an excellent physical equipment. According to the norms of the United States Public Health Service, the boy at fourteen stands 60.3 inches high and weighs 95.4 pounds. In other words, although he has attained about two-thirds of his adult weight, he had completed something like nine-tenths of his full growth in height. Growth, therefore, from this time on, will consist not so much in increase of the size of the skeletal system as in increase in muscular development. At fourteen the boy is slightly shorter and lighter than the girl, but in another year he will have outstripped her in both measurements.

Not only is the boy almost an adult in absolute size,

but the proportions of his parts are now distinctly mature. He carries himself much more like a man than he did two years before. His general build distinctly approaches that of an adult.

The foregoing general statements must be modified somewhat on account of the phenomenon of adolescence. Perhaps there is no other age less homogeneous than the age of fourteen. While the preceding paragraphs are true of the average boy of this age the separate individuals of the group show all degrees of variation between maturity and immaturity. While many fourteen-year-olds are well developed, some individuals show an immature physical type which would scarcely distinguish them from the twelve-year-old.

Adolescence also is the cause of the extremely rapid development which characterizes this age. According to Davenport (4) the boy gains sixty-six millimeters during his fourteenth year, which is more than he gains during any year of life after his third birthday. Davenport (3) has analyzed the curve of growth into three periods, a period of very rapid growth during infancy, a period of gradual growth during childhood, and finally another period of very rapid growth at adolescence. At fourteen the boy will probably be entering upon his final period of rapid development.

In mental growth the boy of fourteen has nearly reached his limit. While the measurement of intel-

ligence has not reached the same stage of accuracy as has the measurement of physical growth, it seems fairly certain that there is little increase in pure general intelligence after fourteen. The boy of this age, therefore, is probably the equal of the adult in test intelligence. In after years he may acquire new knowledge and learn new ways of applying his intelligence, but in mental alertness itself he probably does not greatly progress.

All states of the Union have compulsory school-attendance laws, requiring attendance up to the age of fourteen or more. But in those states which set the limit higher than fourteen a very common exception allows boys to leave school for work after their fourteenth birthday. And so this age may mark the beginning of full-time employment. In the case of the earlier ages the American boy is almost sure to be in school but from this time on a division appears between boys in school and boys at work.

At the age of fourteen the average child is getting ready to graduate from grammar school, in case his school system is organized on the 8-4 plan. If it follows the 6-3-3 scheme he will probably be in the midst of his junior high school course. In either case there should be some attempt at about this time to correlate school work with a possible vocation. The fourteen-year-old may not be able definitely to say what occupation he has decided to make his life work, but he should know the general occupational

division which he will probably finally choose. He should know at least whether he would like to enter one of the professions, or go into one of the trades. This degree of specialization is almost necessary at this period.

As far as personality is concerned the fourteen-year-old group is divided into two groups by the phenomenon of adolescence. The less mature boys of this age may show the same type of preadolescent personality which was characteristic at twelve. The more mature boys will probably exhibit almost the same maturity as the sixteen-year-old.

In the group herein studied forty-four per cent of the fourteen-year-olds had shown the characteristic adolescent change of personality, while thirty-nine per cent of them had not. The remaining seventeen per cent of the cases were doubtful, being presumably in a transitional stage. It is interesting to compare with these figures the data on physical maturity of seventeen boys of the group, in whose cases such information was available. Of these, fifty-six per cent were prepubescent, eleven per cent pubescent, and thirty-three per cent were postpubescent. The only comparable figures which the author has at hand were derived by interpolation from Crampton's (2) data for New York City high-school boys, for whom the corresponding figures were thirty-four per cent, twenty-eight per cent, and thirty-eight per cent respectively. It is evident that—aside from a few

transitional cases—the fourteen-year-old group is divided between the preadolescents and the adolescents. The personality of the boys in these groups will now be considered separately.

Case 48. Aloysius may be taken as representative of the preadolescent boy of fourteen. He was rather small, weighing eighty-three pounds and standing just under four feet, ten inches in height. But what he lacked in size, he made up in physical activity. He was very much alive and he played all the team games with enthusiasm.

A scrap from his diary records his activities for a Friday in October. He got up at quarter past six, dressed and went on an errand. Breakfast followed at seven and then he spent fifty minutes studying his lessons, which had been neglected the night before. He went to school early enough to spend about a quarter of an hour playing in the yard. He had lunch at home. When school was dismissed at half past two, he had to attend choir practice for forty-five minutes. Aloysius then went home and changed his clothes and played football on a vacant lot for an hour. Afterward he washed up, ate his dinner, studied a while, and attended a Scout meeting. Then he went home and read a book for an hour, finally retiring at half past ten.

A Saturday in the same month finds him rising at half past eight. He ate breakfast, read a little while and spent most of the morning playing football.

After a hasty lunch at half past twelve, three and a half more hours of football followed. He ate dinner at half past five and read from then until bed time at nine o'clock.

As will be seen from the above, Aloysius spent most of his free time playing football. Had his diary been written in the summer it would have showed a similar enthusiasm for baseball and swimming. He has the uncritical love of active sport, which so often characterizes the boy of twelve. When his intelligence was tested on the Stanford Revision he obtained an IQ of 108. Like many boys of average or superior intelligence he enjoyed reading and when he could not be out of doors playing with the other boys he could usually be discovered deep in a book. His reading showed the same love of excitement that characterized his play life. The two kinds of books which claimed the lion's share of his attention were books of adventure and books dealing with athletics.

Scouting, which is so popular with the preadolescent, had a big appeal for Aloysius. He attended Troop meetings regularly and enjoyed the informal games which were always a part of the program. He was always on hand for hikes and Patrol meetings and he was an enthusiastic bugler in the local Scout drum and bugle corps. The boys in Aloysius' patrol lived within a small radius and spent a great deal of time in each other's company. These boys used to make independent excursions to a small woods

about half a mile from their home. They used to gather there and smoke. Then they would run down hill with their mouths open to remove from their breath the evidence of this minor delinquency. The success of this stratagem is not recorded.

It must not be thought from the above account that the preadolescent thinks of nothing but physical activity. Although some of the major attractions lie in this field, his interests are extremely catholic. Athletics may be his dominant enthusiasm, but he has a thousand other minor ones. One type of preadolescent activity is illustrated by the following case.

Case 49. Joseph is a very tiny boy, rather thin and pale, but with high color on his cheeks and with bright, dark eyes. An examination on the Stanford Revision revealed that he had "very superior intelligence" and this fact is confirmed by conversation with him. He is a voracious reader of popular scientific books. An afternoon spent with him in a museum showed that the boy's store of information includes something about the spiral nebulæ, something about the prehistoric civilizations of Central America, the differences between a reflecting and a refracting telescope, and something about Michaelson's experiments to determine the velocity of light.

Joseph is a bashful child and it is difficult to establish rapport with him. He does not mingle freely with the other boys. Baseball and football appeal

to him, but instead of playing these games on organized teams with other boys of his age, he plays them informally on a small vacant lot near his home and usually with younger lads.

In spite of Joseph's unusual mental ability and in spite of the range of his information, there is no doubt that he is definitely preadolescent. Maturity of personality is quite different from intelligence and it is altogether possible to be accelerated in the latter, and retarded in the former. Such is indeed the case with Joseph.

Preadolescence has been called the "gang age." By this it is not implied that gangs do not exist at other ages, but among preadolescent boys the gang seems to play a part which is definitely characteristic of the period. It is, therefore, not surprising to find that most of the preadolescents of fourteen organize their activities around a group of boys of their own age. This is illustrated by the fact that of eleven fourteen-year-old preadolescents in the present group who had been Scouts, only one had lost his interest in the movement. Scouting is a form of activity which so well epitomizes the gang spirit that when a boy suddenly leaves it, one may guess that it is the beginning of the end of the gang age.

Case 59. For about three years a group of seven boys have been meeting regularly after school on a vacant lot playing baseball, football, or other appropriate sports. They call themselves the "Young

Seminoles" after a sand-lot team, the "Seminoles," who had achieved considerable local fame.

The leader of this group is a fourteen-year-old boy named Johnny. He is about the normal weight and height for his age, while an examination on the Stanford Revision reveals the fact that he has "very superior" intelligence. He seems to be a quiet boy and is somewhat repressed in the presence of elders. Even among his own gang he generally keeps in the background; but in spite of this fact he is, without doubt, the moving spirit of the group.

The Young Seminoles meet regularly every week and have recognized rules of their own. They elect officers and appoint boys from their own number to manage and coach their various teams. Every fall they organize a football team and every summer they form a baseball team. In order to have a full team they must adopt extra members temporarily; but the original seven form the permanent nucleus of the group. They do all this without any adult assistance—a fact which speaks volumes for Johnny's organizing ability. For the past year and a half the Young Seminoles have been members of a near-by Scout Troop. They entered *en masse* and became the "Wolf Patrol."

In spite of the three year's history of the Young Seminoles as a closely organized group, signs of dissolution are at hand. The eighth grade of the school which Johnny is attending is planning a baseball

team next spring and it seems to be certain that the boy will transfer his allegiance from his gang to his school team. There is talk about making him manager of the latter. Thus the gang serves its purpose. It trains the boy in group life and then, as he grows older, it gives place to the larger social group.

The boys thus far mentioned represent the less mature among the fourteen-year-olds. The difference between them and boys of twelve are quantitative rather than qualitative. Now we come to the study of a group of fourteen-year-olds showing a different type of personality.

One of the first things to strike the observer of the adolescent at this age is his growing independence of personality. He suddenly demands the privileges of adulthood and rebels when his elders do not grant them immediately. The result is the inevitable storm and stress of adolescence. The case of Robert will illustrate all this.

Case 51. Robert was one of the best-natured boys I ever met. He was very popular among his fellows and was uniformly in high spirits. He was somewhat below the average in intelligence, his Stanford IQ being 89, but he was an outstanding athlete.

At the time of his fourteenth birthday Robert's school teacher began to find him hard to manage. This was unusual in a boy of his sunny disposition. He acquired the habit of spending his evenings with a number of other boys roaming around the neigh-

borhood. One time the group tried to break up a party which a classmate was having. A policeman chased them away. Minor delinquencies of this sort were common, but they never got into serious trouble. The leader in a local club found the lad a difficult case to handle.

Most of Robert's friends at this time were high-school boys, and he began to feel out of place with the younger boys in the grammar school he attended. He took only a half-hearted interest in their sports, although formerly he had been one of the school's outstanding athletes.

Probably parents and other adults with whom the adolescent comes in contact are partly responsible for many of the latter's defects of adjustment. The mother who has been accustomed to instant obedience from her son grows resentful when the boy chooses his own companions and his own amusements. The teacher who has had no difficulty with a growing boy is surprised at the latter's sudden independence of attitude. The difficulty of readjustment at this age should be recognized frankly by both parents and teachers. Only such frank facing of the problem can lead to a happy solution.

No account of the psychology of the adolescent fourteen-year-old would be complete without some mention of the adolescent love affair. Anton is a good example of this.

Case 52. For several months the eighth grade

drew entertainment from the love affair of Anton and Kathryn, or "Babe" as the latter was generally known. Every morning Anton accompanied her to school, every afternoon he walked home with her, every evening he called at her house. The distracted school teacher did her best to capture some share of the pair's interest; but the competition was hope-

TABLE I

PERCENTAGE OF FOURTEEN-YEAR-OLD BOYS SHOWING SPECIFIED PERSONALITY DIFFICULTIES CLASSIFIED ACCORDING TO MATURITY.

	No difficulties	Non-Social	Effeminate	Minor Delinquencies	Love Affairs	Miscellaneous
Boys With Preadolescent Personality	63	21	16	0	0	5
Boys With Adolescent Personality	41	0	6	47	12	0

less. Lessons and everything else were neglected. Anton wrote Kathryn's initials on his books, on his desk, even on his canvas shoes.

The difference between the adolescent and the preadolescent at this age is well shown by an examination of the personality problems which the two groups present. These are shown in percentage form in the accompanying table. It will be noticed that

the adolescents present more problems than do the less mature boys, fifty-nine per cent of the former showing such defects as against thirty-seven per cent of the latter. It is, however, more instructive to analyze these problems according to type. The outstanding defects of the preadolescent boys were effeminacy and lack of good social adjustment with their companions, while their more mature fellows were guilty of many minor delinquencies and were involved in a number of adolescent love affairs. The common factor running through the defects of the less mature boys was a certain imperfect socialization. The most common defects of the adolescent boys of this age were results of the previously mentioned lack of readjustment on the adult level. The difference is best illustrated by cases. First the cases of two preadolescent fourteen-year-olds will be presented.

Case 53. Kenneth was a boy who was very much retarded physically and mentally, as well as in personality. His DA was 87, while his IQ was 78. A Stanford Achievement Test showed that he was also very much retarded in his school work. Not only was he very small and slight for his age, but his whole physique was that of a much younger boy. Even a couple of years later when Kenneth was sixteen, it would be hard to persuade an observer that he was over thirteen.

Kenneth showed the same immaturity in his per-

sonality. He never took part in the team games which were popular among most boys of his age and never played on any organized team. He would occasionally play catch or kick a football with the other boys of his block. Kenneth was very quiet and repressed and was teased somewhat by the other boys in his room. He never seemed to be able to make adequate social adjustments and he was the butt of many practical jokes.

It may be added that with adolescence most of these defects cleared up and now, at the age of twenty, Kenneth seems to get along quite well with his fellows. He is playing his modest part in the world of men with gratifying success.

Case 54. Alfred at the age of fourteen spent most of his time playing with the younger children living near his home. He played informal baseball games with them on a vacant lot. Sometimes he would even indulge in dramatic play. Once the writer discovered him playing church and unwittingly interrupted a most elaborate marriage ceremony. The other boys in the school did not tease Alfred but they privately regarded him as a bit queer. He never became a fully accredited member of their group. He was shy and repressed and never spent much time with the other boys of his age.

In the case of Alfred, as in the case of Kenneth, adolescence brought successful readjustment. Two years later, although Alfred was still somewhat repressed, he no longer had difficulty in making con-

tacts with others. He was well liked and even popular in his modest way.

In marked contrast to the problems of less mature boys are the problems of the fourteen-year-old adolescent. Defects arising from a lack of self-confidence now give way to defects whose origin is the exact opposite. The preadolescent has the tendency to be too shy; the adolescent is often too self-assertive. In almost half of our adolescent cases minor delinquencies of one sort or another were noted. Of these none was serious enough to bring the boy into contact with the law. But they were real defects just the same. Many of the boys were hard to control. They were disobedient at home or at school and they caused trouble in club meetings. Some of them smoked and played poker and tried manfully to get drunk on home brew. Others were responsible for minor acts of mischief in their neighborhoods, ranging from general boisterousness to some property damage. Although these boys may never be brought into court, their behavior defects ought by no means to be neglected.

Case 55. Wallace was in the seventh grade at the time of his fourteenth birthday. He was conspicuous for his size among the younger boys of his class. His home background was poor. A deserting father had left the family in financial straits and, since his mother had to work, there was little home supervision.

In school the teacher found Wallace difficult to

control. He seemed to have little interest in the lessons and was constantly disturbing the class by making remarks or by snapping paper clips at other children. Outside of class he was a bit of a bully. With another boy who was his constant companion he roamed about the neighborhood after school and well into the evening, searching for excitement. Excitement came in the form of street fights, and other minor disturbances. It was unfortunate that Wallace's limited intelligence made school work unattractive to him. He substituted for a drab school life a life of excitement in his hours of leisure.

Case 56. Denis was a boy of slightly more than average intelligence. At fourteen he was in the eighth grade of a grammar school and was doing satisfactory work there. He seemed to feel, however, somewhat ill at ease among the younger and smaller boys of his class. Generally he did not mingle with them, but spent most of his time with a group of older boys who went to high school. His teacher reported that he was surly and difficult to handle in class and she felt that she had to rule him with a firm hand. A club leader found that although Denis was one of the officers of the club he was very undependable. As long as an adult was present he was quiet and respectful, but when the boys were left by themselves Denis could always be depended upon to start some mischief. He brought some home-made beer into the club and encouraged smok-

ing among the boys, although this was against the club rules.

The problems of the fourteen-year-old have never been frankly and adequately recognized in our educational and social system. The boy of this age is likely to be in the midst of an important change. New emotions and new ideals sweep in upon him and we leave him by himself to adjust himself to them as best he can. He is likely to be surly and a bit difficult. If only we had the insight to look beneath the surface we would realize something of the struggle through which he is passing. We would realize that he needs adult guidance and help as he never did before. Many primitive people have initiation ceremonies by which the child of about this age is received into the adult group. Civilized society sorely needs an equivalent of these initiation ceremonies. Primitive tribes have been wiser than we in recognizing the difficulties of this age and in developing an institution to meet them. We, too, should strive to develop some way of helping our boys and girls over this difficult period in which they pass—often with startling swiftness—from childhood into adult life.

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CHAPTER X

THE SIXTEEN-YEAR-OLD

On his sixteenth birthday the boy is generally in the midst of a period of readjustment. Physically and mentally he is mature, but he has not yet adjusted himself to this maturity. He is old enough to go to work and earn his own living, yet he still shares the irresponsibility of the school boy. He has reached the legal age of marriage—at least in many jurisdictions—yet he may be shy and awkward in the presence of girls. He is almost as big and strong as a man but his mother has to remind him about his rubbers. The age of sixteen is characterized by two things—first, by an almost completed development of mind and body, and second, by a personality unadjusted to this new maturity.

The maturity of the boy of his age shows itself in almost every aspect. All except a negligible minority of sixteen-year-old boys are adolescent. By interpolation from Crampton's (4) norms it may be estimated that eighty-nine per cent of them are postpubescent. This means, among other things, that the last, or adolescent, growth cycle has reached its

climax. According to the United States Public Health Service norms the average boy of this age stands 64.6 inches tall and weighs 116.7 pounds. Growth of the skeletal system, therefore, is almost complete, and although this framework will be overlaid in succeeding years with an increasing amount of muscular and adipose tissue, the general physique of the sixteen-year-old boy is not greatly altered in after life. It is not possible to describe the growth of intelligence in such relatively exact quantitative terms, yet it seems fairly clear that mental growth after sixteen is small, if indeed it takes place at all.

The maturity of the boy of sixteen is reflected in society's attitude toward him. In nearly all countries of the world the majority of these boys are at work and even in the United States, where child-labor legislation is comparatively stringent, the laws of most states permit the boy of sixteen to enter full-time employment. Many state laws permit the boy of this age to marry. Under the common law he is treated as an adult if he breaks the law. Even where the juvenile court has been established it frequently loses jurisdiction after the age of sixteen.

The same maturity which shows itself in physical and mental growth and in society's attitude is also reflected by certain personality changes. Something has happened within the lad which makes his preferences and his whole attitude toward life strikingly adult in many ways, even though he has not yet

sufficiently adjusted himself to this new-found maturity. He has put aside the things of a child and has begun to show an interest in adult affairs. The following cases will help to illustrate the type of personality characteristic of the boy at this age.

Case 57. At fifteen years and six months James was an enthusiastic member of a Boy Scout Troop. Although he was a first-year student in a local high school he spent a great deal of time playing with the boys of the grammar school, from which he had just graduated. His closest friend and constant companion was one of these.

At sixteen all this had changed. James had dropped out of the Boy Scouts and had abandoned his old friends in the grammar school. All his spare time was now devoted to a group of new companions who lived in his neighborhood. The group often congregated on a near-by playground where they played tennis, baseball, football, and basketball in a rather shamefaced way, as though such sports were somehow beneath their dignity. James and his new companions were much more serious about an old automobile with which they liked to tinker.

At this time the boy developed a deep resentment toward his teachers in school. He seemed to take a great deal of delight in making life miserable for them. He pleaded with his mother to be allowed to leave school at once and go to work and alleged his responsibility toward the family as a reason.

James seemed to be very conscious of his new-found maturity. He treated younger lads with a poorly concealed contempt. Older people found him hard to manage. He was supercilious, defiant, and very sensitive toward the least exercise of authority.

Case 58. Alan was a type of boy much different from James. Whereas the latter had always been popular, Alan was shy and repressed. All during his grammar school career Alan had never mingled freely with the other boys nor taken part in their sports. Yet, in spite of the vast differences in personality Alan showed his maturity at sixteen as unmistakably as James.

His sixteenth birthday found Alan doing excellent work in the second year of a small high school. He had long since severed his connection with the Scouts, of which he had once been an enthusiastic member, and had dropped out of a local boys' club, to which he had formerly belonged. Alan and five other high-school boys formed a little club of their own, to which they gave a mysterious name composed of Greek initials. The club met once a week, the members acting as hosts by turns. They tried to have a formal debate on a prearranged topic at each weekly meeting, and the evening was brought to a close with refreshments.

Alan himself was still as shy as he had been in his grammar-school days. He had, however, ac-

quired a great deal of poise. One gained the impression that the boy's personality would not greatly change in the years which were to come.

Case 59. A third type of personality is illustrated by Cyril. He never showed the superciliousness of James nor the effeminacy of Alan. He was a likeable boy of average intelligence and physical development. He played all the team games well and enjoyed movies and reading.

At sixteen Cyril was a second-year high-school student. He was popular with the other boys of the school and equally popular among the members of a local boys' club, to which he belonged. In fact, his personality led to his election as president of the latter organization. At sixteen Cyril showed a distinctly mature personality. His success as club president showed that he could accept responsibility and carry minor affairs through to a successful conclusion. He showed poise in managing club matters, yet he never appeared vain.

Cyril was a good athlete. He played basketball and football and although he never became an outstanding star, he was always distinctly above the average. A wide variety of play interests bore evidence to a well balanced recreational life.

The above cases show certain common factors which indeed are characteristic of the age as a whole. All these boys had a certain poise. They were at ease in conversation with adults. A grown person

talking with them would feel no compulsion to "talk down" to them. They all showed, too, a new feeling of seriousness and responsibility. James showed this by his somewhat sudden claim that he ought to go to work to support the family. Alan and his group showed it by their weekly debates at club meetings. Cyril displayed the same characteristic by the efficient maner in which he handled club meetings. None of these boys could have done any of these things a year or two earlier. All three boys had a healthy love of recreation but here, too, there was manifest a striking growth in maturity since the age of fourteen. James now played the team games with a certain air of condescension. Cyril still played the team games with enthusiasm but he played them on organized teams, whereas two years earlier he had played them informally on vacant lots. The maturity of the sixteen-year-old readily reveals itself to the student of boyhood.

Another sign of the approach of adulthood is the greater frequency of the love affair at sixteen as compared with fourteen. The records of the present writer show such a phenomenon in thirty-six per cent of the former as against seventeen per cent of the latter group. This fact, of course, means that at sixteen more boys have reached adolescence and all of them have had more opportunity for meeting girls. The case of Richard will serve as one more illustration of the adolescent love affair.

Case 60. Up to the age of sixteen Richard had always been a "man's man." His interest in the usual team games had always been high. His splendid physical development enabled him to play these games unusually well. Shortly before his sixteenth birthday he met Jane and his whole personality underwent an immediate and striking change. Overnight he became a social lion. He learned to dance and began to smoke and drink. He abandoned the younger boys who had previously been his constant companions. He became vain, overbearing, and a bit difficult from the standpoint of his parents and teachers.

The above cases are fairly representative of the average boy of sixteen, but it must be remembered that even at this age Crampton's figures show that a few lads have not yet reached adolescence. Correspondingly there is a small percentage of sixteen-year-old boys who have not yet shown the characteristic adolescent change of personality. The case of Charles will illustrate this.

Case 61. At the age of sixteen Charles was below the norms for his age to the extent of about five inches in height and thirty-seven pounds in weight. Not only was he short and light but his whole appearance was that of a much younger boy. In mental age, too, he was much retarded, his Stanford IQ being 80.

In personality Charles showed the same imma-

turity. He was an enthusiastic Boy Scout and was a very active member of a Patrol made up of boys two or three years younger than he. Charles enjoyed hiking in the woods. He enjoyed Troop meetings and played a drum in his Troop's drum and bugle corps. Charles played the team games only informally. In these sports the boy's companions were uniformly lads much younger than he.

In spite of exceptions like Charles, it is generally true that the boy of sixteen has many of the characteristics of an adult. He had not yet, however, come to a point where he can take his place fully in the grown-up world. There is still one thing which prevents the sixteen-year-old from being considered an adult and this is the fact that, in spite of his excellent physical and mental equipment, in spite of the maturity of many of his desires and impulses, he has not yet adjusted himself fully to the new life within him. At the beginning of this chapter it was said that two things characterized the sixteen-year-old boy—the maturity of his equipment and his failure to adjust himself to this. The preceding cases have been presented to illustrate the fundamental maturity of the sixteen-year-old. It is now in order to consider some of the failures in adjustment which are equally characteristic of this age.

Probably many of these difficulties of adjustment are really the fault of the adults with whom the adolescent comes into contact. He feels himself a

man and yet so quickly has the change taken place that his parents, his teachers, and his friends do not realize it. The boy believes that he should be given a wider liberty, that he should be trusted with larger responsibilities; but the adults who are over him remember that a few months ago he was only a child and they refuse to accept the boy's valuation of himself.

Thus difficulties arise between the sixteen-year-old and his elders. He feels that he is misunderstood and unfairly treated. He suffers from a sense of injustice. He rebels against the restraint which older people continue to exercise over him. At heart the adolescent feels hurt and misunderstood. On the surface he may be merely supercilious and vain. The adolescent is apt to be a bit trying to his elders by his boasting and his apparent contempt for their wisdom, but he is only trying to express himself and he is intensely in need of understanding and sympathy.

Case 62. Victor will illustrate the conceit of many sixteen-year-olds. All during his grammar school course the boy had been a model of good nature. He was popular among his fellows, played the team games well, and was an interested member of the local Scout Troop.

At about the time of his graduation from grammar school Victor began to show signs of uneasiness. He spent more and more time with one boy, who

was himself much more mature than the other boys in the class. During his first year in high school he gradually relinquished his interest in Scouting. He had been a member of a local boys' club but now he began to feel that this was a bit too childish for him, so he resigned in order to join a near-by basketball team of older boys. He was only a substitute on this team, but he preferred to play a minor rôle among the older boys rather than be a leader in the younger group. At the same time a very marked change had taken place in Victor's personality. Instead of being good-natured and accommodating he became very conceited and sensitive. He treated younger boys with contempt and considered himself quite the young man.

Sometimes the adolescent's rebellion against adult rule shows itself in overt acts rather than a mere attitude. Both types of reaction, however, probably have a common origin. They are both a protest against the world's failure to accept the adolescent at his own valuation.

Case 63. Stanley will illustrate this. He was a boy of average intelligence, size, and weight. In his relations with other boys he was much more likely to be a follower than a leader. He was, however, a member in good standing of the school group in which he moved. He was fond of athletic sports and was known among his fellows as being a perfectly likeable and normal boy.

After his fifteenth birthday Stanley began to fall under the influence of Denis, a boy of about the same age, but with far more initiative and leadership than himself. Along with two or three others they formed a group which was a constant cause of disturbance at school, in the local boys' club, and in their home neighborhood. They were readily controlled when an adult leader was present, but in his absence they would break windows and furniture and generally make nuisances of themselves. After a few months Stanley and Denis and one other boy had to be expelled from the club. Thus it came about that Stanley, who had always been a very quiet and inoffensive lad (and who was so ever afterward), was for a short period around his sixteenth birthday a rather delinquent and unmanageable case.

By the sixteenth birthday some boys have already passed through their period of storm and stress and have readjusted themselves to society. The average sixteen-year-old boy, however, is likely to be a bit difficult. But there is some compensation for this in the fact that certain problems common among younger boys have been outgrown by the age of sixteen. These, of course, are problems characteristic of immaturity. Seventeen per cent of our twelve-year-old cases were rated effeminate, twelve per cent of the cases at fourteen, and only four per cent at sixteen. This means, of course, that the new life

which in the average boy results in mischief and minor delinquencies may benefit the effeminate boy and give him a new self-consciousness which will help him to take his place as a normal member of the group.

Case 64. Gerald was a boy of unusual intelligence who, however, had never been popular among his fellows in grammar-school days. He very seldom took part in active sports and when he did so he played them awkwardly. He was very shy among his fellows and in consequence was the butt of a great deal of teasing and ridicule. He was distinctly a "sissy" and his life was more or less miserable.

At one time Gerald joined the Scouts and his excellent intelligence helped him to make quick progress through the tests. He never became a First-Class Scout because he could not swim, but his Scouting experience helped to lessen the gulf between him and his fellows. Before his fifteenth birthday Gerald left the Scouts. He was at that time doing excellent work in a local high school. By his sixteenth birthday a very marked change was apparent. Although still somewhat timid he had now acquired a great deal of poise. Though he never was accepted by his classmates as a "regular fellow" he was respected and no longer teased. Other boys gradually revised their opinion of Gerald and he even began to enjoy a limited popularity.

Measured in terms of personality a vast difference

separates age six from age sixteen. The sixteen-year-old boy is much more at home with his forty-year-old father than with his six-year-old brother. At six the child can barely be trusted to find his way alone from home to school. At sixteen he is, at least in his own opinion, the captain of his soul. At six he is a ridiculously undeveloped mite of humanity. At sixteen he has the body and mind of a man. Few things in the whole realm of science are as wonderful as the gradual unfolding of the developing personality.

It remains for us that we should take advantage of our growing knowledge of child development to smooth the path for normal growth. Many of the difficulties of childhood and youth are due to the inadequacy of our adult-conceived social and educational system into which we try to force the personality of the growing child. In the present century a distinct effort is being made to fit the school to the child, rather than the child to the school. As our knowledge of child nature grows it will become increasingly possible to do this successfully. Thus we shall be able gradually to bridge the gap between childhood and adulthood and to lessen the difficulties of adjustment which disturb the growing boy. An appreciation of the social relations of childhood, based upon a thorough knowledge of the child's developing personality, would help us to pave the way for him to a fuller and happier adult life.

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